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A Basis for the Improvement of Education In Rural Monroe County, Indiana

By

HENRY LESTER SMITH

and

FOREST RUBY NOFFSINGER

Bureau of Coöperative Research, Indiana University
School of Education

HENRY LESTER SMITH, Director

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Preface

GENERALLY speaking, it is the desire and the responsibility of the faculty of a teacher-training institution not only to train teachers and other educational leaders for service over a wide area of territory but also to welcome the opportunity to coöperate in the improvement of the school system in the geographical region in which the teacher-training institution is situated. The School of Education, Indiana University, has always been eager to give professional help locally and to profit through such affiliation. My own personal desire to share in the practical phases of educational improvement in Monroe County, Indiana, has been augmented by my experience as a rural school student in five different rural schools in this county during the period of my elementary school training.

I am extremely grateful, therefore, to share in the effort to increase, through this survey, the progress of the schools of the county. Too little attention has been given to rural schools in this county and in many other counties throughout the United States. In other matters the distinction between rural and urban is rapidly decreasing. It should be so for education.

It is to be hoped that this survey will be but the beginning of a careful and continuous study of the rural schools of the county, that from this study will result the development of one of the outstanding county school systems in this part of the country, and that the children of the county schools may receive the equality of educational opportunity which is their birthright.

The sincere coöperation of the teachers and township trustees of the county has made this study possible and promises aggressive continuance of the program for improved educational services in the county. The county superintendent, Mr. Clarence Leuck, by his energetic educational leadership, aided materially not only in the execution of the survey but also in the actual compilation of results in certain phases of the study. The service of directing the part of the survey dealing with unadjusted children was donated by Dr. Grover T. Somers, Professor of Education, Indiana University. The detailed direction of the survey and the writing of the original manuscript for the final report were carried out by the co-author, Dr. F. R. Noffsinger, Bureau of Coöperative Research, Indiana University.

H. L. SMITH.

CHAPTER I
ORGANIZATION AND EXECUTION OF THE SURVEY

EARLY in December of 1933 Indiana University was invited to participate in the Civil Works program of the federal government. On December 11, Dean Henry Lester Smith, School of Education, learned that funds had been granted by the federal government for making a survey of the Indianapolis public schools. Previous to this time Dean Smith had proposed an educational and sociological survey of Monroe County outside of Bloomington to Thomas W. Rogers, Monroe County Civil Works Administrator, but it had seemed doubtful whether federal funds could be used for such a survey. Dean Smith immediately communicated with Administrator Rogers who, on December 15, suggested that a formal application for the project be made out and submitted to the State Civil Works Board. The application was submitted on December 22, and called for seven persons to be employed for a total of 1,302 hours at a total cost of $651, all supplies and materials needed in connection with the project to be donated by the University and the School of Education. On January 18, 1934, Dean Smith was notified by the local Civil Works Administration Service Office that the project had been approved as Project No. A 512 and that work could begin at once. Dr. F. R. Noffsinger was designated to direct the survey, interview prospective workers, and select a survey staff of seven women, most of whom were to be from those with some teaching experience. On January 22, the field work was begun with the following staff: Mrs. Grace Tower, Mrs. Mildred Noel, Mrs. Pernie Blackwell, Mrs. Grace T. Oberlin, Miss Louise Hastings, Miss Lois Taylor, and Miss Hilda Kearns. In the original application the number of hours per week allotted to each worker was 30 and the completion of the survey was based on the assumption that work would begin on January 1 instead of January 18. On January 23 instructions were received to reduce the week from 30 hours to 24. Therefore a supplementary application was filed on January 23, stating that it would be impossible to complete the work on the date specified in the original application because of the possibility of using only 675 hours of the 1,302 hours allocated in the approval of the original application, and requesting 10 additional workers for a total of 720 additional hours. This supplementary application was approved on February 2 and during the following week the following were added to the staff: Mrs. Mary Stineburg, Mrs. Lydia E. Thompson, Mrs. Blanche Medlock, Mrs. Florence Gooldy, Miss Janice Kunz, Miss Esther V. Nugent, and Mrs. Ruby Welch. Miss Nugent was replaced by Miss Pansie Roach during the week ending February 15.

On February 14 the project was transferred from the Civil Works Administration Service to the regular Civil Works Administration and a transfer application was filed. This application was approved as project No. A 5,120 on February 23 and the work was continued under

the same staff except that one additional member, Mrs. Ruth Duke, was added during the week ending February 23.

The field work on the survey was completed and the test papers were all scored by March 22. The Civil Works Administration was discontinued and the project was ended during the following week. A total of 2,104½ hours, amounting to $1,052.25 at 50 cents per hour, had been paid for by the Civil Works Administration.

However, much tabulation of results remained to be done. In the meantime, while the Civil Works Administration was passing out of existence, the Federal Emergency Relief Administration was being created and plans were completed to aid college students in earning their way through college by participating in numerous projects beneficial to the community and the university. From this source two projects were financed: the completion of the survey, and a related project, the location of unadjusted children in Monroe County outside of Bloomington. These two projects were approved by the University early in March and the following students were employed to tabulate the results of the survey and locate unadjusted children in the county: H. C. Amstutz, H. W. Buchanan, G. M. DuPlan, Miss Charlotte Grant, W. E. Hiner, F. G. Kruchten, K. S. Kunz, Miss Ruth Schneider, Miss Mary Anabel Scott, Miss Ethel Stroud, J. E. Waskom, A. C. Windell, Hal Winter, and Miss Charlotte Van Tochine. During the months of March, April, May, and June these students were employed a total of 1,613 hours at a total cost of $492.56.

As has been indicated, the field work of the survey began on January 22. Five members of the survey staff designated as survey visitors were selected to visit schools, administer tests, copy classroom records, collect information concerning the buildings and grounds, secure a copy of the daily program, obtain the location of the residence of each pupil, collect information concerning bus routes, have questionnaires filled out by pupils of Grades 4 to 8, and have a questionnaire filled out by the teacher.

The field work was so arranged that one full day was required by the survey visitors to give tests and to collect the information from each classroom. The following data were gathered from each classroom:

1. National Intelligence Test papers from all pupils in Grades 3 to 8.
2. Haggerty Reading Examination papers from all pupils in Grades 1 to 3.
3. Stanford Achievement Test papers from all pupils in Grades 4 to 8.
4. The daily program for the room.
5. A pupil questionnaire from all pupils in Grades 3 to 8.
6. A teacher's questionnaire from each teacher.
7. A map of the school district showing the residence location of each pupil enrolled.
8. A building score card filled out in detail.
9. Monthly teachers' marks in each subject for each pupil for the first semester of the school year, 1933-34.
10. Subject scores for each pupil on the Indiana New-Type Test given by teachers at the close of the first semester of the school year 1933-34.

In the four towns of Smithville, Ellettsville, Unionville, and Stinesville, where high schools are maintained, information was collected concerning the high school teachers and the daily program. From each high school pupil was secured a filled-out questionnaire and an Otis Intelligence Test paper.

Transportation of the survey visitors to the 62 schools in the county was a difficult problem. Many of the one-teacher schools are rather inaccessible during wet weather because of poor road conditions. Because of the changeable weather during the months of January and February, the schedule of visits often could not be decided until the visitors were ready to start on their day's work. With the aid of County Attendance Officer Robert Smith, and of the County Superintendent of Schools, Clarence Leuck, each day's schedule of visits was determined. Transportation to the amount of 966 miles was required to collect the information from all the schools. Except for 285 miles travel by the director, transportation was donated by the county superintendent, the county attendance officer, and faculty members in the School of Education of Indiana University. Except for three trips to Polk and Salt Creek townships, each requiring a full day, the visitors, with their supplies, were taken to the schools in the morning, and brought back at the close of the school day with their work completed.

The questionnaires to be filled out by pupils and teachers were mimeographed in the office of the School of Education. Cards for individual pupil records were donated through the office of the county superintendent. Tests and school building score cards were purchased by the School of Education. Tabulation blanks were mimeographed in the office of the School of Education. Summary tables and preliminary reports of the survey were typed by students working under the FERA program. Pupil questionnaires were tabulated by Mr. Frederick G. Neel during the summer of 1934.

A part of the work of locating unadjusted children was accomplished through the office of the county superintendent. Mimeographed blanks were sent to each teacher in order to secure the desired information concerning unadjusted pupils. Pupil progress through the grades was determined from blanks sent by the county superintendent to each teacher.

The funds for the conduct of the survey were secured from the following sources:

1. Federal government—

From CWA for labor	$1,052.25
From FERA for labor and typing	972.56
Total	$2,024.81

2. Donated by H. L. Smith—

For tests	$ 301.20
For age-grade tables	7.40
Total	$ 308.60

3. Donated by Bureau of Coöperative Research, School of Education, Indiana University—

For publication (estimated)	$ 500.00
For labor	136.50
For direction	750.00
For tests	155.95
For supplies	126.52
Total	$1,668.97

4. Donated by School of Education faculty members and county school officials—

For transportation	$ 48.30

5. Donated by office of county superintendent of schools—

For grade record cards	$ 34.50
Total from all sources	$4,085.18

It can be seen from the preceding statement that the labor cost for the survey totaled $2,911.31, including $750 for direction. The cost of tests amounted to $457.15; other supplies, $168.42; transportation, $48.30; and publication, estimated at $500.

The survey report is organized under the following general topics: (1) The Setting, (2) The Agencies of Instruction, (3) The Results of Instruction, and (4) The Future Program. Notably brief is the section dealing with unadjusted children, but this curtailed report is due to the planned publication of a special bulletin on the subject. It will be noticed also that little has been done with the results of the high school survey. Originally it was planned to make the same detailed study of the four high schools of the county as has been made of the elementary schools. But as the elementary phase of the survey developed and grew it was seen that the detailed study of the high schools would have to be delayed to a later date. Lack of time to analyze carefully the pupil questionnaire tabulations prohibited the use of detailed results from that source. However, the major implications of the sociological survey so far as education is concerned have been indicated.

CHAPTER II
DESCRIPTION OF MONROE COUNTY

EDUCATIONAL conditions are the outgrowth of the particular pattern of topographic, climatic, and human features of any community. To understand the educational program of a community and to propose satisfactory measures for the improvement of that program it is first necessary to know the topographic and climatic influences and to review the human history of the region.

Monroe County is in the south central part of the state of Indiana, about 52 miles southwest of Indianapolis. (See Figure 1.) Morgan and Owen counties bound it on the north, Owen and Greene counties on the west, Lawrence County on the south, and Jackson and Brown counties on the east. The outline of the county is nearly rectangular. It has an area of 416 square miles or 266,240 acres. The county is divided into three distinct physiographic areas: (1) the Norman upland, (2) the Mitchell plain, and (3) the Crawford upland.

Figure 1. Location of Monroe County.

The Norman upland is a plain cut across by many ravines and narrow river valleys. It covers the eastern part of the county extending westward nearly to Harrodsburg, Smithville, Unionville, and Hindoostan, a line identified roughly with State Road No. 37 leading from Martins-

ville through Bloomington to Bedford. The main divides are small flat areas and long narrow ridges, the tops of which represent remnants of old plains into which creeks and their tributaries have cut V-shaped valleys from 200 to 400 feet deep. As a rule the stream bottoms are narrow and bounded by steep slopes.

The Mitchell plain lies just west of the Norman upland and extends a short distance west of Harrodsburg; thence north and northwest along an irregular boundary to the county line west of Ellettsville. This generally smooth and level plain is at places very irregular, owing to numerous sink holes and some rough areas dissected by streams.

The Crawford upland includes the remainder of the county west of the Mitchell plain. Like the Norman upland it is a dissected plain but the ridge tops are broader and more rounding, the hillsides more gentle, and the valleys broader. The drainage is not so complete, and some streams which rise in the hills disappear in sink holes when they reach the valleys.

The average elevation of Monroe County is about 760 feet above sea level. The highest elevation is 1,006 feet and the lowest is 490 feet. The Kirksville, Stanford, and Unionville ridges rise to an elevation of about 900 feet and the Mitchell plain to between 700 and 800 feet.

Monroe County lies between the two forks of White River, which receive all the drainage waters of the county. Although the west fork touches the northwestern corner of the county and is the outlet for Bean Blossom Creek, the greater portion of the area drains through Salt and Indian creeks to the East Fork of White River. The top of the divide between these forks lies close to the route of the Illinois Central Railroad across the county. Both Salt and Bean Blossom creeks meander in rather deep channels through flat, overflow lands from one-fourth to one and one-half miles wide and several hundred feet below the adjoining uplands. The upper portions of Clear Creek and Indian Creek flow through comparatively shallow valleys in gently rolling country. Clear Creek has underground tributaries which drain the sink-hole country and issue as springs. Similarly some small streams west of Bloomington pass underground to outlets in the Richland Creek valley.

The climate of Monroe County is characteristic of southern Indiana. The mean annual figures of the Weather Bureau station at Bloomington are: temperature, 53.2°F.; precipitation, 37.63 inches; and snowfall, 26.1 inches.

Spring and autumn temperatures approach the annual mean, but there is a difference of nearly 44° between the means of winter and summer. During fall, winter, and spring the ground frequently freezes by night and thaws by day, thus loosening the soil and causing rapid erosion. The average frost-free season is 175 days, from about April 24 to about October 16, which is sufficient for maturing all of the common crops. The rough surface of the area causes many local variations in frost occurrence. Crops are more likely to suffer from frosts on bottom lands than elsewhere. The hilly lands are considered safer for orchard sites because of better air drainage. The latest recorded killing frost in the spring occurred on May 25, and the earliest in the fall occurred on September 14.

The rainfall is well distributed through the year, the least occurring in the fall. September, the driest month, has an average rainfall of 2.45 inches, and March, the wettest month, averages 4.13 inches. When the moisture is properly conserved it is more than sufficient for the crops.

The story of farming in Monroe County has been much the same as in other sections of southern Indiana. In the latter part of the nineteenth century, lumbering increased the amount of virgin soil available for farming. The land which was level enough for cultivation has been farmed more or less continuously, until some fields have become "worn out." The land has been subdivided again and again, decreasing the average size of farms.

While the better farm lands of the state have increased several times their original value in recent years, land values in Monroe County have remained low. The crops commonly grown have been limited to corn, hay, wheat, and oats. The most remarkable change in recent years has been the great increase in the production of poultry, eggs, milk, and

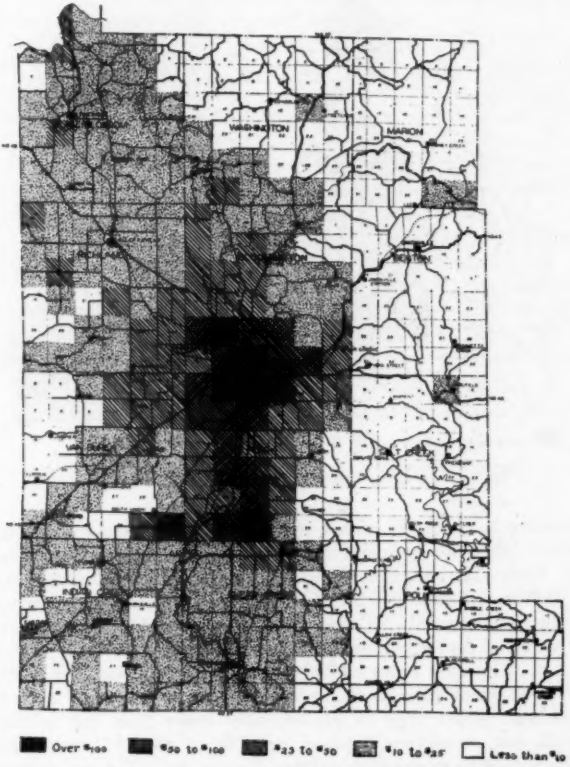


Figure 2. Value per Acre of Real Estate in Monroe County.

butter, which now constitutes the source of over one-fifth of the farm income. Although orcharding seemed promising and many peach and apple trees were set out, results have not proved very satisfactory, since few of the farmers have studied fruit growing to any great extent.

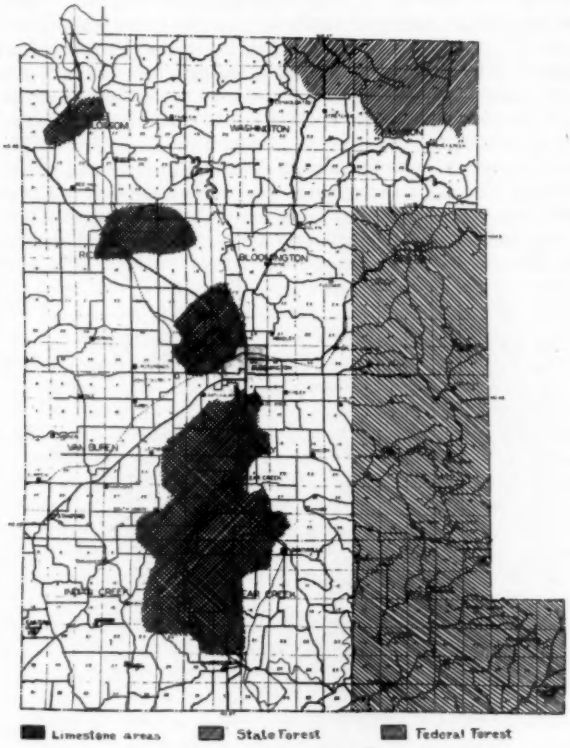


Figure 3. Limestone Areas in Monroe County.

According to the 1930 census there were 1,959 farms of all types in the county. This number represents a decrease since 1920 of over 12 per cent. Only 72.1 per cent of the total area of the county was in farm acres in 1930 as compared with 85.7 per cent in 1920. The average size of farms in 1930 was only 98 acres as compared with 102.2 acres in 1920.

The value of real estate in the county is indicated in the map shown in Figure 2. The data from which this map was constructed were taken from the assessment rolls in the county auditor's office, and even though the assessment values may be considerably lower than the actual value of the land, yet, were they doubled, only 68 of the 416 square miles in the county would have average values of more than $50 per acre.

The Norman upland in the eastern part of the county has a very low value. Of the land in Polk Township only six square miles in the

northern part are valued at more than $5 per acre. Salt Creek, Marion, Benton, and Washington townships have little land valued at more than $10 per acre, and that land is usually found in the form of home lots located along the state highways leading from Bloomington into Brown County. The Crawford upland in the western and southwestern parts of the county is only slightly more valuable than the Norman upland. The most valuable land is found in the Mitchell plain which, south of Bloomington, parallels state road No. 37, and, north of Bloomington, swings to the west to include the area surrounding Ellettsville and Stinesville. Not only does this area include the best land in the county for farming purposes, but it also contains the limestone quarries, which form the principal source of income in the county.

Figure 3 shows the location of the building stone quarries and mills in the county. The Bloomington Limestone Company and the Indiana Limestone Company own and operate the most of the quarries. The area of Monroe and Lawrence counties comprises the Indiana limestone district. The production of the entire district amounted in 1930 to over 12,250,000 cubic feet valued at over $15,000,000.

The state of Indiana, some years ago, recognized the inability of some of the land in Monroe County to produce enough for the sustenance of farm enterprises. A large tract of land in Marion Township and several sections in eastern Washington Township were purchased by the state, joined with equally unproductive acres purchased in adjacent Morgan County, and converted into a forest known as the Morgan-Monroe County State Forest. As rapidly as the land was purchased by the state, the inhabitants moved out of the area and into other more productive areas. In this way the difficulties of maintaining an efficient educational program in this more or less isolated section were eliminated. In all of Marion Township only one one-teacher school remains. Because of the extent of submarginal land in this county and in adjacent counties, the federal government has developed plans to create a federal forest reserve and have designated Benton, Salt Creek, and Polk townships in this

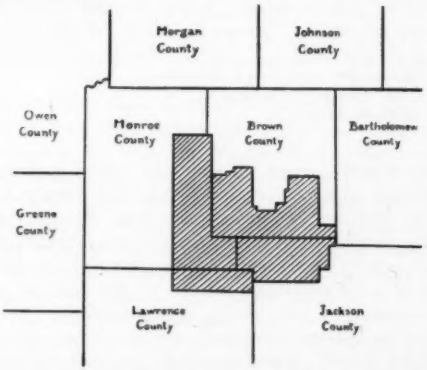


Figure 4. Area of the Pleasant Run Federal Purchase Unit and Its Relation to Monroe County.

county as a part of the area in which purchases, over a long-time period, are to be made. The forest reserve is to be known as the Pleasant Run Forest Reserve. Its total area is shown in Figure 4. When this extensive purchase of land has been completed, no less than 20 one-teacher schools will be eliminated and the difficulties of maintaining satisfactory schools in this more or less unproductive and isolated area will be eliminated.

The population of the county as a whole has increased 11,455, or 46.7 per cent, in the decade from 1920 to 1930. (See Table I.) However, this increase has been limited almost wholly to the city of Bloomington and adjacent territory in Perry and Bloomington townships. The increase over 1920 in the county outside of the city of Bloomington has been 37.3 per cent, and in the 10 townships outside of Perry and Bloomington the increase has been only 16.3 per cent.

TABLE I. POPULATION BY MINOR CIVIL DIVISIONS, ACCORDING TO THE U. S. CENSUS OF 1930

Civil Division	1930	1920	1910
Monroe County	35,974	24,519	23,426
Bean Blossom Township	1,443	1,285	1,761
Benton Township	1,012	803	962
Bloomington Township	12,543	9,041	7,354
Clear Creek Township	1,990	1,610	1,713
Indian Creek Township	902	758	860
Marion Township	218	300	365
Perry Township	12,140	5,769	4,970
Polk Township	876	1,027	1,054
Richland Township	1,973	1,549	1,578
Salt Creek Township	690	615	885
Van Buren Township	1,401	1,053	1,153
Washington Township	786	709	771
Bloomington City*	18,227	11,595	8,838
Stinesville†	310	299	497
Ellettsville‡	767	721	676

* Included in Bloomington and Perry Townships.
† Included in Bean Blossom Township.
‡ Included in Richland Township.

Three factors have caused the increase in the population of the city of Bloomington and adjacent territory: (1) the growth of Indiana University, (2) the increase in the manufacture of furniture and in the activities related to that industry, and (3) the further development of the limestone industry represented by the opening of new quarries and stone mills. It is quite possible that the 16 per cent increase in population in the remainder of the county was generated by the increase in Bloomington and by the improvement of state roads leading into Bloomington along which people purchased small lots, and erected homes, and on which they had easy access to the city. There is no indication that farm population increased materially during the decade. According to the

1930 census only 28 per cent of the total county population was engaged in agriculture. Table II shows the distribution of rural farm population by townships.

TABLE II. RURAL FARM POPULATION BY TOWNSHIPS IN MONROE COUNTY, ACCORDING TO THE U. S. CENSUS OF 1930

Township	Population	Township	Population
Bean Blossom	940	Perry	1,048
Benton	950	Polk	737
Bloomington	1,260	Richland	688
Clear Creek	1,007	Salt Creek	597
Indian Creek	659	Van Buren	1,211
Marion	218	Washington	731
		MONROE COUNTY	10,046

A brief view of the composition of the population of Monroe County as presented in Table III shows that the proportion of males to females is about equal; that less than 2 per cent of the total population is negro, centered almost entirely in the city of Bloomington; and that less than 3 per cent of the total population is of foreign or mixed origin, again centered in the city of Bloomington.

As to age, the population of the county seems normally distributed, according to Table IV. About 56 per cent of the population is 21 years of age or over, while only about 5 per cent of the population is 65 years of age or over.

Table V shows the occupations of the people of the county who are 10 years old and over. Agriculture claims the largest group, while the stone industry ranks a close second. Lumber and furniture industries, extraction of minerals, automobile agencies and filling stations, and professional and semi-professional service are the next four ranking occupations.

The primary roads leading into Bloomington are well improved. Three state roads cross the county: (1) state road No. 37 leading from Martinsville, to the north, through Bloomington to Bedford to the south; (2) state road No. 46 leading from Nashville, to the east, through Bloomington to Spencer to the northwest; and (3) state road No. 45 leading from Brown County, to the northeast, through Bloomington to Bloomfield to the southwest. A number of excellent stone roads and a network of clay roads traverse the various sections of the county. The clay roads in some sections are passable only in dry weather rendering some sections, such as the extreme southeast, central north, and central west, almost wholly isolated for much of the year. Figure 5 shows the location of the three types of roads and the areas little served by passable secondary roads. Figure 6 shows the areas served by mail routes from Bloomington, Ellettsville, Gosport, Martinsville, Unionville, Smithville,

TABLE III. DISTRIBUTION OF POPULATION OF MONROE COUNTY BY SEX, COLOR, AND NATIONALITY, ACCORDING TO THE U. S. CENSUS OF 1930 *

Monroe County Townships	Total Population	Sex		Color		Native White			Foreign Born White
		Male	Female	White	Negro	Total	Native Parentage	Foreign or Mixed	
Bean Blossom	1,443	729	714	1,443	...	1,443	1,394	39	10
Benton	1,012	537	475	1,012	...	1,012	1,005	7	...
Bloomington	12,543	6,254	6,289	11,992	534	11,877	11,443	434	115
Clear Creek	1,990	1,045	945	1,990	...	1,990	1,980	10	...
Indian Creek	902	469	433	902	...	901	896	5	1
Marion	218	122	96	218	...	216	212	4	2
Perry	12,140	6,024	6,116	12,126	5	11,985	11,606	379	141
Polk	876	461	415	876	...	876	875	1	...
Richland	1,973	1,025	948	1,972	1	1,963	1,917	46	9
Salt Creek	690	343	347	690	...	689	685	4	1
Van Buren	1,401	732	669	1,400	1	1,397	1,371	26	3
Washington	786	415	371	786	...	780	763	17	6
MONROE COUNTY	35,974	18,156	17,818	35,407	541	35,119	34,147	972	288

*U.S. Census, 1930, Vol. III (Population), Part I, p. 738.

TABLE IV. DISTRIBUTION OF POPULATION OF MONROE COUNTY BY AGE GROUPS, ACCORDING TO THE U. S. CENSUS OF 1930 *

Monroe County Townships	Age in Years							
	Under 5	5-14	15-24	25-34	35-44	45-64	65 and Over	21 and Over
Bean Blossom	177	333	230	173	155	261	114	776
Benton	111	253	207	116	93	176	56	515
Bloomington	1,287	2,461	2,398	1,996	1,521	2,163	693	7,438
Clear Creek	272	480	375	259	219	286	96	1,006
Indian Creek	135	212	141	122	91	139	62	466
Marion	21	50	32	15	25	56	19	124
Perry	1,429	2,481	2,321	2,028	1,594	1,797	464	6,870
Polk	135	229	170	85	83	128	46	401
Richland	210	448	324	286	224	343	138	1,105
Salt Creek	84	179	129	67	70	126	35	327
Van Buren	165	351	212	181	144	228	119	748
Washington	91	176	140	89	80	146	64	418
MONROE COUNTY	4,117	7,653	6,679	5,417	4,299	5,849	1,906	20,194

* U.S. Census, 1930, Vol. III (Population), Part I, p. 738.

Harrodsburg, Solsberry, and Spencer; and also shows the points of scant population and inaccessibility.

From the description just given in the preceding paragraphs the character of the population can be seen to fall into five rather distinct

TABLE V. PERSONS 10 YEARS OLD AND OVER ENGAGED IN GAINFUL OCCUPATIONS IN MONROE COUNTY, BY SEX AND INDUSTRY GROUP*

Industry Group	Male	Female
All Industries	10,486	1,990
Agriculture	2,019	46
Farmers (owners and tenants)	1,430	37
Farm managers and foremen	10	3
Farm laborers	579	6
Wage workers	401	4
Unpaid family workers	178	2
Forestry and fishing	22	.....
Coal miners	2	.....
Other extraction of minerals	851	5
Building industry	648	9
Chemical and allied industries	22	4
Clay, glass, and stone industries	1,657	53
Clothing industries	17	29
Food and allied industries	139	14
Automobile factories and repair shops	58	.....
Blast furnaces and steel rolling mills	4	.....
Other iron and steel industries	114	2
Lumber and furniture industries	919	82
Paper printing and allied industries	52	26
Textile industries	1	3
Electrical machinery and supply factories	28	1
Independent hand trades	36	44
Other manufacturing industries	219	28
Construction and maintenance of streets	155	2
Garages, greasing stations, etc.	121	1
Postal service	61	5
Steam and street railroads	538	9
Telegraph and telephone	49	36
Other transportation and communication	182	2
Banking and brokerage	49	20
Insurance and real estate	97	25
Automobile agencies and filling stations	128	11
Wholesale and retail trade, except automobiles	820	249
Other trade industries	9	5
Public service (not elsewhere classified)	108	16
Recreation and amusement	64	28
Other professional and semi-professional service	553	503
Hotels, restaurants, boarding houses, etc.	156	239
Laundries and cleaning and pressing shops	44	45
Other domestic and personal service	142	400
Industry not specified	402	58

*U.S. Census, 1930, Vol. III (Population), Part I, p. 727.

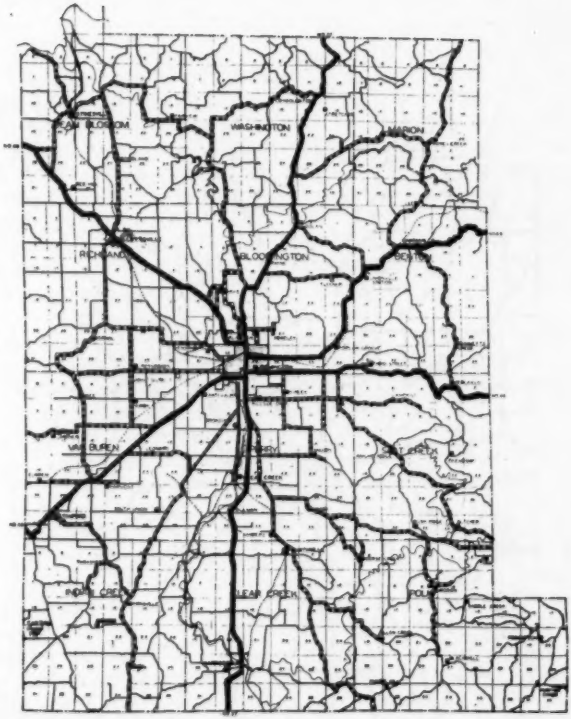


Figure 5. Road System in Monroe County.

groups: (1) people who live in the small towns of Smithville, Kirksville, Ellettsville, Harrodsburg, Stinesville, and Unionville; (2) people who live in the vicinity of Bloomington on well-improved roads and who are interested chiefly in the affairs and activities of Bloomington; (3) people who live in the isolated sections in the eastern and north central parts of the county, particularly in Washington, Marion, Benton, Salt Creek, and Polk townships; (4) people who live in the quarry and mill sections, particularly in western Clear Creek, Bloomington, and Perry townships and in northern Richland and central Bean Blossom townships; and (5) people who live in the more prosperous farming regions

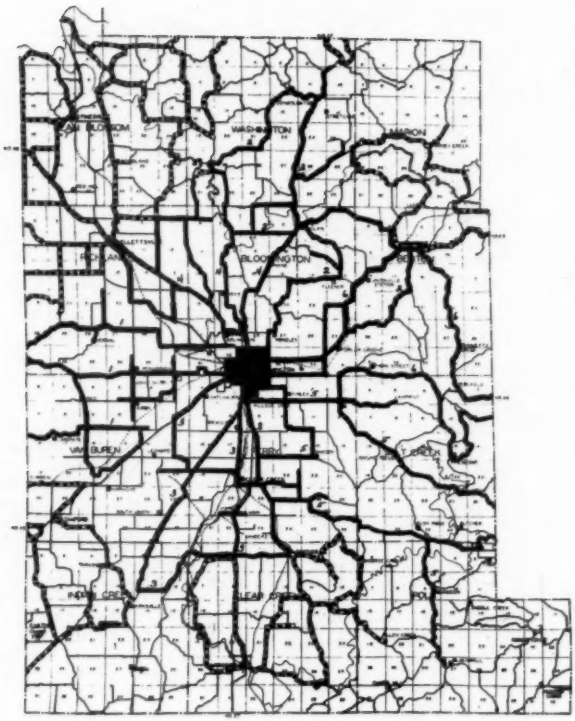


Figure 6. Rural Mail Routes in Monroe County.

of Richland, Van Buren, Indian Creek, Clear Creek, Bloomington, and Perry townships. The five groups, with their varying ambitions, educational levels, standards of living, economic conditions, and social status create in the different communities acute educational problems with which the educational authorities of the county must cope,

CHAPTER III
DEVELOPMENT OF EDUCATION IN MONROE COUNTY[1]

MONROE COUNTY was carved out of a part of Orange County by an act of the state legislature effective April 10, 1818, two years after Indiana had achieved statehood. The northern boundary at that time was a line extending from Gosport to Section 26 of the present Benton Township, a line formed by a treaty with the Indians made at Fort Wayne in September, 1809. In April, 1818, the new county officers laid out the county seat town of Bloomington. In October of the same year a new treaty with the Indians, made at St. Marys, Ohio, provided for the New Purchase and expanded the boundary of Monroe County to its present line.

At the time when the county was formed, a number of families were living in the territory which fell within the new boundaries. These pioneer settlers, as was the case with many of the other settlers of Indiana, were at first too busily engaged in gaining the bare necessities of life and in securing protection from the Indians to be able to provide schools for their children. But with the gravest of their trials behind them, the early settlers began to think of the education of their children. And so during the winter of 1818-19 the first school in the county was organized. Sessions were held in the newly erected log courthouse in Bloomington and, it is thought, were presided over by Mr. Addison Smith. Children of school age to the number of 140 were living in the town when this first school was opened. In the two years following, the school-age population was doubled in the rapidly growing town.

Soon log schoolhouses were erected by the citizens of the town to care for the rapidly increasing demand for education. The second school was established in Clear Creek Township in 1822, and in the same year a third school was located in a deserted log cabin near Ellettsville in Richland Township. Two years later schools were established in Perry, Van Buren, and Indian Creek townships. The eastern part of the county was not settled at such an early date, and therefore the establishment of schools in that area did not come for several years. Three early schools were begun in Benton Township about 1838. Two log schools, one in the south and a second in the north section, were established in Salt Creek Township in 1839. The pioneers of Salt Creek Township found it difficult to maintain schools and sessions were held at different points in abandoned log cabins.

Reports of the schools of the county indicate that by 1853 there were at least 51 schools established to care for a school-age population of 4,910 children, of which perhaps less than one-fourth were enrolled in school. In spite of a negative vote in 1849 by the county on the estab-

[1] A more detailed history of education in Monroe County, written by Miss Louise Hastings while employed as a member of the CWA staff of the survey, is on file with the county superintendent of schools of Monroe County.

lishment of free public schools, the free schools were established throughout the state in 1852 and the civil township displaced the district as the unit. The growth of schools and the development of education in Monroe County for the next fifty years parallels very closely the growth and development of education in other parts of Indiana. Schools increased in number; frame buildings replaced the earlier log structures; teachers were required to possess certain qualifications, to hold licenses, and to attend county teachers' institutes; schools were organized on a graded basis; the curriculum was expanded to include subjects in addition to the three R's; courses of study were put into use; attendance was improved; and the school term was lengthened from 60 days in 1855 to 120 days in 1900.

By 1900 the number of schools had reached its maximum of 106. In the first decade after 1900 a total of 13 schools was discontinued. In spite of a rather widespread movement during the decade from 1910 to 1920 to consolidate schools in Indiana only 1 school was discontinued in Monroe County. But from 1920 to 1930 the consolidation movement took hold and the number of schools was reduced from 92 to 64. Consolidation during this period was most complete in Clear Creek Township where all the one-teacher schools were combined into a four-room building at Harrodsburg and a combined twelve-year school at Smithville. Washington Township erected a four-room consolidated school and transported all the elementary pupils to this school except the children in the vicinity of the Stretcher school, where road conditions made it impossible to transport children from the district. After the consolidation of schools at Ellettsville only two small schools remained in Richland Township, one at Vernal and one at Crossroads. Three schools, Fairview, Woodland, and Red Hill, were not discontinued when the schools of Bean Blossom Township were consolidated at Stinesville, nor were the Clay and Thrasher schools included in the consolidation of elementary schools in Indian Creek Township at Kirksville. The elimination of land from private ownership in Marion Township automatically disposed of the schools of that township except for the Honey Creek school. Partial consolidation was effected at Unionville when the seventh and eighth grades of the entire township were united with the high school, but the 4 one-teacher schools enrolling pupils in the first six grades still remain. Van Buren, Salt Creek, and Polk townships still maintain the district schools, the latter two areas largely because of the topographic barriers to consolidation. Bloomington and Perry townships have to a large extent used school sites of an earlier date but have replaced several one-teacher buildings on these sites with three- and four-teacher buildings. New sites were selected and four-teacher buildings erected at Arlington, Hillside Drive, and Broadview.

Progress in other phases of education in Monroe County has followed rather closely that which is commonly found in many other sections of Indiana having a combination of one-teacher and consolidated schools.

CHAPTER IV
TEACHERS IN MONROE COUNTY SCHOOLS

THE efficiency of instruction in any school system depends, among other factors, upon the quality of teaching ability. Instruction includes the contacts that the teacher makes with the pupils in the schoolroom in the regular work of the school day. It also includes those intangible results of out-of-school contacts which the teacher makes with the pupils, the members of the community, school officials, other members of the profession, and life in general.

An attempt was made to investigate, by means of a questionnaire to the teachers themselves, some of the evidences of out-of-school contacts which contribute to a greater or lesser degree to the efficiency of instruction in the schools of the county. Questionnaires were returned by all the elementary and high school teachers of the county except two high school teachers who were not employed at the Smithville schools until the beginning of the second semester. The teachers of the Bloomington city schools are not included in the discussions of this chapter.

Of the 133 teachers questioned, 93 were women and 40 were men. As to age, 82 of the 133 teachers were under 31 years of age, while 24 were 40 years old or over. No township showed an excessive number of teachers in either the very young or the very old age groups.

Approximately 62 per cent of the teachers employed are under 31 years of age, and 92 per cent are under 51 years. Too great a number of very young teachers might indicate that young, inexperienced teachers are being employed because they can be secured at the minimum teacher's salary. Too large a number of very old teachers might indicate a degree of stability in the teaching staff which could result in lack of progress and inefficiency. Only 3 teachers in the county have reached the age of 60 and only 1 other teacher is over 55.

An analysis of the age of teachers in relation to the type of school in which teachers are employed shows a slight tendency toward the employment of teachers of the upper age levels in one-teacher schools. Of the 24 teachers over 40 years old, 11 have positions in one-teacher schools, and all 4 of the teachers over 55 years of age are located in one-teacher schools. In no one type of school are very young teachers employed to a degree out of proportion with the ratio for the county as a whole.

The social background of teachers may be an important factor in the efficiency of teaching. Since Monroe County is largely rural in character, it would seem that teachers with a rural and local background might have greatest possibility for effective service. No fewer than 80 of the 133 teachers of the county stated that their fathers' occupation was farming. Approximately half of the teachers of the county were born in the county and only 5 were born outside the state. A total of 96 teachers indicated that they had lived in the county at least a part of their childhood. Only 8 teachers spent their entire childhood period in a city.

It is significant that 66 of the 133 teachers are products of Monroe County high schools (including 29 who were graduated from the Bloomington high school). Many of the remaining teachers were graduated from other small high schools, most of which are located in counties in Indiana near Monroe County or in other sections of Indiana having characteristics similar to those of Monroe County.

The amount, quality, and recency of training of teachers is likely to influence the efficiency of teaching. Only 26 of the 133 teachers of the county have received the Bachelor's degree from a higher institution of learning. Of this number only 4 have received the Master's degree, although 20 have taken some graduate work. In most cases college training has been received at Indiana University. Central Normal College, at Danville, and Indiana State Teachers College, at Terre Haute, stand next in order of frequency. No other college, university, or normal school is represented by more than one teacher. There is evidence therefore that, on the whole, the teachers of the county are largely the product of the two-year normal course in the three Indiana institutions: Indiana University, Central Normal College, and Indiana State Teachers College.

The recency of training of the teachers of the county seems very satisfactory. Of 103 teachers who gave information on this point, 72 had been graduated from high school in the period from 1921 to 1930, 23 in the period from 1911 to 1920, and only 8 previous to 1911. Teachers were asked to give the date on which they last attended an institution of higher learning. Of the 118 who responded, the date was given by 65 teachers as being since 1930, by 40 teachers as being in the period from 1921 to 1930, by 7 teachers as being in the period from 1911 to 1920, and by 6 as being previous to 1911. Teachers should keep progressive and abreast of the changing conceptions of education and educational needs. Frequent attendance at a college or university affords one opportunity for keeping up-to-date. At least 13 teachers of the county have not attended any college, normal school, or university since 1920. On the other hand, progressive tendencies among teachers of the county are evident from the fact that approximately half of the teachers have attended college since 1930.

The age at which teachers begin their work may throw some interesting light upon the attitude of teachers and their efficiency in teaching. Two teachers of Monroe County began teaching at the age of 15, and 4 began at the age of 16. Several teachers began teaching before the law required a two-year teacher-training course. All the other teachers of the county began teaching between the ages of 18 and 23, except 1 who began at the age of 35, and 1 who did not indicate the age at which she began to teach.

The number of years of teaching experience may have some relationship to the efficiency of the teaching staff. Analysis of the questionnaire replies shows that of 128 teachers who gave their experience record, only 14, or slightly less than 11 per cent, were beginning teachers, and only 44 teachers (approximately 34 per cent) had taught 5 years or less. On the other hand, 52 teachers, or 40 per cent, had taught 10 years or longer. Only 13 teachers had taught 20 years or longer, and

only 4 of these had taught 30 years or longer. In other words, only 1 teacher in every 10 is a beginning teacher, and not more than 1 teacher in every 10 has had 20 or more years of experience. The average number of years of experience for the 128 teachers is 9.3 years.

A further analysis of the experience of teachers of the county indicates that 43 of the 113 teachers reporting were serving their first year in the present position. The remaining 70 teachers have served 1 year or more in their present position, 24 have served 2 years, 15 have served 3 years, 16 have served 4 years, and 15 have served 5 or more years. One teacher has taught in the same position for 16 years. This presentation shows that there is a considerable amount of shifting in positions among the teachers of the county. When 38 per cent of the teachers of an organization are serving in their present position for the first time, it is likely that there is too much shifting of position.

Evidence has already been presented to show that a large per cent of the teachers of the county are products of the educational institutions of the county. Because of the tendency of school officials to employ home teachers during the period of the depression, it might be expected that permanence of tenure within the county would be very high. A total of 70 of the 125 teachers reporting have taught 5 or more years in Monroe County, and 30 of these 70 teachers have taught in the county 10 or more years. Such a condition might be desirable were it not for the fact that there seems to be too much shifting of teachers from one position to another within and among the various townships.

Evidence was secured to account for the frequent changes in position of teachers. The data presented in Table VI seem to lead to the suspicion that a large number of changes are due to three factors: first, change in trustees bringing with it a change in political faith; second, personal desires of trustees; and third, an effort on the part of trustees to avoid the responsibility of placing teachers on tenure. Table VI presents a list of reasons teachers gave for being compelled to change from one position to another. The three reasons just mentioned were found to have the greatest frequency.

A total of 59 teachers indicated that they had been compelled to change their position for at least 1 reason during their teaching experience, 16 of the 59 indicated stated that at least 2 different reasons were responsible for changes which they were compelled to make, 6 gave 3 reasons, and 2 gave 4 reasons. The 93 teachers who answered the question on changes in position were compelled to change, for 1 or more of the reasons listed in the table, a total of 108 times out of an aggregate of 983 years of teaching experience, an average of 1 compelled change for every 10 years of teaching experience.

Further investigation of permanency of tenure of teachers in the county was made from the questionnaires of 116 teachers who gave complete records of their teaching experience. The average number of years of experience for this group of teachers was 8.2. This average is slightly lower than it would be if the records of all of the teachers of the county were included. Several teachers who had a long teaching record did not indicate the changes in position throughout the period and therefore were not included in the group of 116 teachers. The 116

teachers had changed position a total of 325 times, an average of 2.8 changes per teacher and an approximate average of 1 change for every 3 years of teaching experience. The data in the preceding paragraph would indicate that of every 7 changes by teachers represented, 2 changes were compelled and 5 were made at the volition of the teacher.

TABLE VI. REASONS GIVEN BY MONROE COUNTY TEACHERS FOR BEING COMPELLED TO CHANGE POSITIONS

Reasons	Number of Teachers Compelled to Change Positions*	Number of Times Teachers Were Compelled to Change Positions
Political affiliation	22	39
Personal wish of trustee	20	25
Tenure would become permanent if hired for another year	12	12
County superintendent's recommendation	2	2
Belief in county unit	1	1
Desire of Klu Klux Klan	1	1
Home teacher hired	5	5
Cheaper teacher hired	1	1
Position eliminated	5	5
Marriage	4	4
Religious belief	3	4
Teacher moved out of district	6	7
License expired	1	1
Illness	1	1
No change compelled	34	.....
No answer	40	.....

* Although 84 changes in position were made, only 59 teachers were compelled to change positions, some teachers being required to change more than once and for more than one reason.

This table and all the other tables of this chapter do not include teachers of the Bloomington city schools.

TABLE VII. LENGTH OF TEACHING POSITIONS IN THE EXPERIENCE OF 116 MONROE COUNTY TEACHERS

Length of Position in Years	Number of Positions Held by Teachers	Length of Position in Years	Number of Positions Held by Teachers
1	218	9	4
2	112	10	1
3	45	11	2
4	32	12	1
5	10	14	1
6	9	16	1
7	5		
8	0	Total	441

The 116 teachers whose experience records in this phase of the study were investigated had held a total of 441 positions. Table VII shows the length of each of the 441 positions.

From Table VII it can be seen that the average length of position was slightly over 2 years; that in approximately half of the cases the positions were held by the teacher for only 1 year; and that in only 34 cases had the teacher taught consecutively in the same school for a period of 5 years or longer.

It has been pointed out earlier in this report that 70 of the 125 teachers in the county have taught for 5 or more years in the county. It was further discovered that 22 teachers in the county are on permanent tenure. But when it is learned that only 34 cases out of 441 positions held through the experience of 116 teachers were 5 or more years in length, it can be seen that tenure in position is very short and that an exceedingly great amount of shifting from position to position in the county is common. If teachers are properly selected, placed, and rewarded there seems to be little excuse for a large amount of shifting. Efficient teaching certainly was not accomplished by a teacher who served 7 different schools in 7 consecutive years of experience.

School officials can practice greater economy by securing more permanency of teacher tenure. It is both an educational and financial waste to shift a teacher from a position before the point of diminishing efficiency has been reached.

The salaries of the teachers of Monroe County, not including teachers of the five-or-more-teacher schools, for the school year 1933-34, were just about as low as they could possibly be in Indiana. Approximately 72 per cent of the teachers received the minimum salary for Indiana, $800. Table VIII shows the salaries of the teachers in the county by townships, and Table IX shows the same distribution by type of school. Only 10 teachers in the one-, two-, three-, and four-teacher

TABLE VIII. SALARIES OF TEACHERS IN EACH TOWNSHIP IN MONROE COUNTY

Salary Groups	Townships												Total Number of Teachers in Monroe County
	Bean Blossom	Benton	Bloomington	Clear Creek	Indian Creek	Marion	Perry	Polk	Richland	Salt Creek	Van Buren	Washington	
$800	8	5	13	7	4	1	19	9	8	6	11	5	96
801 to 900	...	...	2	1	1	...	5	...	...	...	...	...	9
901 to 1,000	4	4	1	6	...	...	...	...	4	...	...	...	19
1,001 to 1,800	1	1	...	2	...	...	...	...	4	...	...	...	8
1,801 to 2,250	...	...	...	1	...	...	...	...	...	...	...	...	1
All Groups	13	10	16	17	5	1	24	9	16	6	11	5	133

schools received a salary over the $800 minimum, and 9 of these 10 received $900 or less. In most cases these 9 teachers were head teachers or principals of three- or four-teacher schools and, as such, received a slightly higher salary. Even in the five-or-more-teacher schools, 15 of the 42 teachers in such schools received only $800. There were only 9 teachers in the entire county outside of the city of Bloomington who received a salary of more than $1,000.

TABLE IX. SALARIES OF TEACHERS IN EACH TYPE OF SCHOOL IN MONROE COUNTY

Salary Groups	One-Teacher Schools	Two-Teacher Schools	Three- or Four-Teacher Schools	Five-or-More-Teacher Schools	Total Number of Teachers in Monroe County
$800	42	12	27	15	96
801 to 900	.....	.....	9	.....	9
901 to 1,000	.....	.....	.....	19	19
1,001 to 1,800	1	.....	.....	7	8
1,801 to 2,250	.....	.....	.....	1	1
All Groups	43	12	36	42	133

Teachers were asked to indicate the salary received in their last teaching position previous to the school year 1933-34. A total of 40 teachers had received over $1,000 and only 36 had received $800 or less. The rather sharp decrease in teachers' salaries between the years 1932-33 and 1933-34 came about through the need for drastic budget reduction in an effort to reduce taxes. Although there has been a need for rigid economy in all governmental expenditures and a constant and insistent call for lower property tax rates, yet there seems to be little reason for such great reductions as were made in teachers' salaries in Monroe County. An annual salary of $800 amounts to $66.66 per month, an amount only slightly more per month than was paid to the unemployed by the government, from relief funds, and for work insignificant in value to the country as compared with the work of educating the children of the nation.

Not only were teachers of Monroe County hired at extremely low salaries for the year of 1933-34, but many were not receiving their salary when it came due. Table X shows that 63 of the 125 teachers who answered the questionnaire on this point had, at the time the survey information was collected, $100 or over in salary due but unpaid, and 49 of the 63 had over $200 due but unpaid.

It is surprising that any teacher could manage to save money from the meager salaries paid, and yet 47 per cent of the teachers stated that they did manage to save some of their salary. Of the 56 teachers who saved some of their salary about half, or 29, saved $200 or less, while only 6 saved over $400. On the other hand, teachers did not contract

TABLE X. SALARIES DUE BUT UNPAID TO TEACHERS IN MONROE COUNTY *

Amount of Salary	Number of Teachers Having Due But Unpaid Salaries for the School Years Previous to September, 1933	Number of Teachers Having Due But Unpaid Salaries for the School Year 1933-34 Only†
None	106	36
Less than $100	1	26
101 to 200	.....	14
201 to 300	1	16
301 to 400	4	17
401 to 500	4	7
501 to 600	1	2
601 to 700	.....	2
701 to 800	.....	4
801 to 900	.....	.....
Above 900	1	1
No answer	15	8
Total	133	133

* This table is read as follows: Of the 133 teachers in the county, 106 had no due but unpaid salary for the period previous to September, 1933, 1 had less than $100, 1 had between $201 and $300, etc.

† Of the 49 teachers entitled to 1933-34 back salaries of over $200, 15 were in Clear Creek Township, 8 in Bean Blossom Township, 7 in Richland Township, and 7 in Perry Township. Of the 12 teachers who had not received all of their salary previous to September, 1933, all except 2 were teaching in Clear Creek Township.

In justice to the trustees of Bean Blossom and Richland townships it should be pointed out that the bank at Ellettsville, in which school funds for the two townships were deposited, was closed in the general bank closing of March, 1933, and later reopened on a restricted basis. School funds were sufficient for the payment in full of teachers' salaries, but the funds were not available because of the bank closing order.

debts very freely. Only 33 per cent of the teachers incurred debts during the year. Of the 38 teachers who went in debt during the year, the total debt of each of 17 teachers was $200 or less, while only 9 incurred debts of over $400.

An attempt was made to discover the living expenses of the teachers of the county. About 75 per cent of the teachers, 99 in all, gave some indication of their monthly living cost. Table XI shows the distribution of these costs. The median cost in the distribution is $47, which is a fairly low amount. Of course the low cost is partially due to the fact that some teachers lived with their parents and received free board and room, which was not accounted for in their total living cost. But even with the amount of $47 monthly cost and a total salary of $66.66 per month, a surplus of only $235 for the year would remain to meet the cost of clothing, books, entertainment, travel, teachers' retirement fund, insurance, summer school, medical care, etc.—an amount entirely inadequate for the high standard of living expected of teachers.

TABLE XI. LIVING EXPENSES OF TEACHERS IN MONROE COUNTY

Living Expenses per Month	Number of Teachers	Living Expenses per Month	Number of Teachers
$176-$200	1	$51-$75	21
151- 175	0	26- 50	33
126- 150	2	0- 25	21
101- 125	2	No answer	34
76- 100	19	Total	133

Over half of the teachers, 65 in all, have no one dependent upon them. Only 9 teachers have 5 or more dependents. Of the 40 men teachers, 27 are married, and of the 93 women teachers, 47 are married. Since 74 of the 133 teachers of the county are married and since 96 teachers of the 133 received only $800 for their year's work, it is evident that several married men teachers had to support their families on $800 per year. In fact, 15 of the 27 married men having from 1 to 8 dependents received only $66.66 per month for the year's teaching. About the same per cent, 6 of 13 single men teachers, received the minimum salary. Only 5 of the 27 married men teachers received as much as $100 per month.

The place of residence of a teacher during her period of service to any community may be a factor in the effectiveness of her service to the community. In Monroe County, at the time of the survey, approximately half of the teachers lived in the community where they taught, while the remaining half went in and out of the district each day. Sixty per cent of the men teachers and only 45 per cent of the women teachers lived in the community. Married men teachers lived in the community in 63 per cent of the cases, while only 45 per cent of the married women teachers did so. Fifty-four per cent of the single men teachers and 48 per cent of the single women teachers lived in the community. Married teachers, as a whole, lived in the community to a slightly greater degree than did single teachers, the per cents being 51 for the former and 49 for the latter. Those teachers who stated that they lived in the community served by the school where they taught lived at distances varying from one-half of a block to 5 miles, with 42, or about two-thirds of the 66 in the group, living 1 mile or less from the school building. Slightly less than one-third of the 67 teachers who lived outside of the community served lived at a distance of less than 5 miles from the building. Several of this latter group lived in Bloomington and taught in schools in the outskirts of Bloomington. The distance was not far, but the teacher was separated from the activities of the community during out-of-school hours.

Teachers were asked to indicate on a checking list the reasons why they lived in the community served by the school where they taught. A total of 60 of the 66 teachers who lived in the community gave a list

of 8 reasons. The distribution of teachers who checked each of the reasons is given in Table XII. In 56 cases the teachers were living in their home community and teaching the home school, while 17 teachers stated that living conditions were cheaper in the school community than in their home community. Only 1 teacher indicated that she lived in the community because by so doing she could learn to know better the children enrolled in her school. It will be noted that the grand total in the table is 100, consideraby above 66, the number of teachers who lived in the community. The difference is accounted for by the fact that many teachers checked more than one reason for living in the school community.

TABLE XII. REASONS GIVEN BY MONROE COUNTY TEACHERS FOR LIVING IN THE COMMUNITY IN WHICH THEY TEACH

Reasons	Number of Teachers Giving Each Reason		
	Men	Women	Total
Home is located in school community	23	33	56
Cheaper living conditions in school community than in home community	7	10	17
Better living conditions in school community	4	4	8
Better community than home community	3	3	6
No satisfactory transportation from home to school	2	1	3
School too far from home	1	1	2
Principal expected to live in school community	1	.....	1
Can know children better by living in school community	.....	1	1
No answer	.....	6	6
Total	41	59	100

Teachers were asked also to indicate reasons for not living in the community in which they were teaching. Table XIII presents a distribution of the number of teachers checking each reason. In this table, again, the grand total is considerably higher than the total number of teachers who lived outside the community, since some of the teachers gave more than one reason. Only 2 teachers of the 67 who lived outside of the school community failed to give any reason for so doing. The most frequently checked reason was that the teacher can live at home more cheaply than she can board and room in, or move to, the school community. This reason was checked by 42 teachers. An additional 10 teachers indicated that they owned their own home in another community and therefore did not move into the school community. In 10 cases women teachers stated that they were needed in their home community to care for dependents already established in that community.

An attempt was made to secure some evidence of professional interest and in-service training among the teachers of the county. The

TABLE XIII. REASONS GIVEN BY MONROE COUNTY TEACHERS FOR NOT LIVING IN THE COMMUNITY IN WHICH THEY TEACH

Reasons	Number of Teachers Giving Each Reason		
	Men	Women	Total
Cheaper to live at home	9	33	42
Have own home in another community	2	8	10
Help to care for dependents living in another community	.....	10	10
No modern facilities in school community	6	3	9
No house available in school community	2	2	4
Live in Bloomington to attend college	3	.....	3
Undesirable school community	.....	2	2
Trustee requested teacher not to live in school community	.....	2	2
No place to board in school community	.....	1	1
No answer checked	1	1	2
Total	23	62	85

results were not very satisfactory from the standpoint of the per cent of teachers replying to the points involved in the questionnaire. Only 44 teachers, a little over 33 per cent, indicated the professional books read during the year past. Only 17 men teachers and 22 women teachers indicated the exact title of the books read, the remaining teachers gave such general answers as "parts of several," "several," "education books," etc.

A greater number of the men than of the women teachers of the county read professional books; 45 per cent of the former and about 24 per cent of the latter. The median age for those who read professional books was 27.7 years as compared with a median age of 28.9 for all the teachers of the county. As has been indicated, however, the replies to this question are too inadequate to form a basis for any conclusions. Nevertheless, the fact that so few teachers responded to the inquiry may be an indication that they had not read any professional books during the year.

It might be suggested that the teachers of the county informed themselves concerning educational matters by reading professional magazines. Investigation of the teachers' replies on this point shows that only 50 teachers, 9 men and 41 women, only slightly over 37 per cent of the entire instructional staff, were subscribers to, or read regularly, any professional magazines. Of this group 33 teachers read only 1 magazine, 12 read 2 magazines, and 5 read 3 magazines.

Many of the teachers who read professional magazines were among those who read professional books. It is therefore evident that the teachers of the county do very little professional reading. It is certainly to be recommended that some means of in-service training be provided for

the teachers of the county. Perhaps a greater security of tenure and the adoption of an adequate salary schedule for the instructional staff of the county would result in a more professional attitude and a greater interest on the part of the teachers in a program of in-service training for improvement. Few teachers can be expected to adopt a program of improvement training or to expend much money for professional literature when salaries remain at $800.

Perhaps the best method of approach to the problem of in-service training could be made through the use of the findings of this survey. By centering the interests of teachers about the weaknesses in instruction disclosed by the survey and by making studies looking toward the removal of such weaknesses, the teachers will receive worth-while in-service training and, at the same time, the children of the county will be rendered valuable service.

Another measure of the professional attitude and progressiveness of teachers is indicated by the summer activities of teachers. Thirty-eight of the 133 teachers of the county, or 28 per cent, attended summer school during the summer of 1933. Of the 40 men teachers of the county, 35 per cent attended summer school, whereas only 26 per cent of the 93 women attended summer school. The type of school in which teachers taught made little difference in the summer occupations. Single teachers attended summer school in greater numbers than did married teachers—36 per cent of the former and 23 per cent of the latter. Salaries received by teachers seem to be a factor in attendance at summer school, for only 24 per cent of the teachers in the $800 salary group attended summer school during the summer of 1933 while 42 per cent of the teachers receiving over $800 attended summer school.

The median age of the group who attended summer school in 1933 was 27; of the group who did not attend summer school, 29; and of the entire group of 124 teachers who indicated both age and summer occupation, 28. The median age for the men who attended summer school was 28 as compared with a median age of 31 for the men who did not attend, while the median ages of the 2 groups of women were the same, 27.

Of course it is not expected that teachers attend summer school or travel every summer. The foregoing presentation has not been based upon that assumption. The data are representative perhaps of the distribution of summer occupations of the teachers of the county for any particular summer.

CHAPTER V
SCHOOL DISTRICTS AND BUILDINGS

THE discussion in this chapter treats of the general findings of the building survey and the proposed solutions to the building problems and district boundaries in the county. Figures 7 and 8, showing existing bus routes, have been included to indicate the areas served by each of the larger schools in the present organization. Each township will be treated separately in the first part of the chapter. In the second part of the chapter a summary presents the proposed picture of district organization in the county.

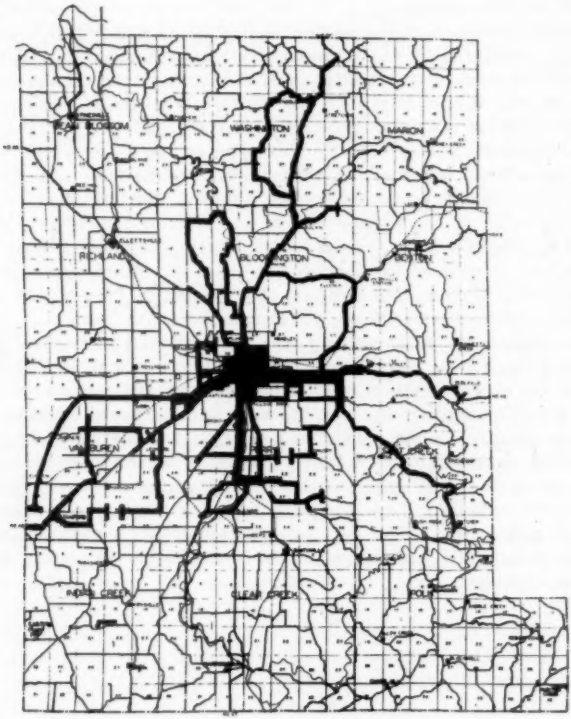


Figure 7. Present School Bus Routes Leading into Bloomington.

Bean Blossom.—At the time the survey was made there were 3 one-teacher buildings and the Stinesville consolidated school building in Bean Blossom Township. During the winter of 1934-35 the consolidated building was destroyed by fire. School was continued in storerooms in the

town. At the time this report is being written, plans are progressing toward the erection, by means of PWA funds, of a new building on the site of the old building. In the new building it is planned to consolidate all of the schools of the township, abandoning the 3 one-teacher buildings.

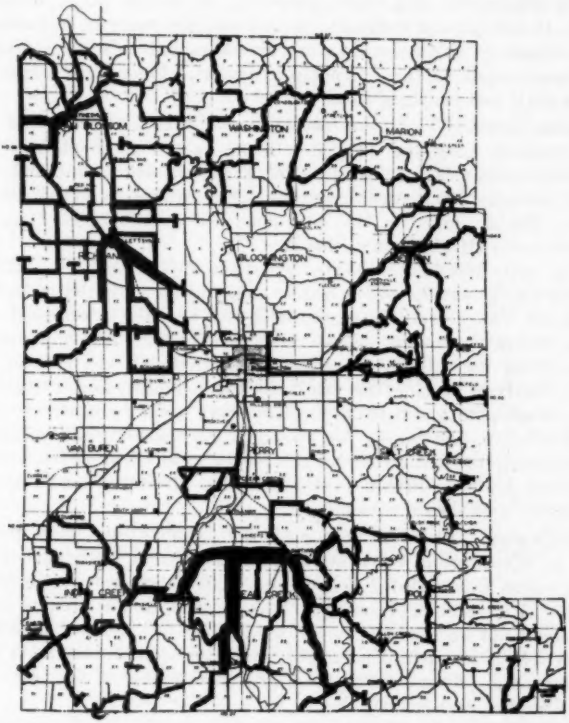


Figure 8. Present School Bus Routes Leading into Township School Centers in Monroe County.

Richland.—Two one-teacher buildings and the consolidated school building at Ellettsville constitute the physical facilities for schools in Richland Township. One of these one-teacher school buildings, Vernal, is perhaps the oldest building in the county used for school purposes, being erected some time before the Civil War and used continuously for school purposes since its erection. Cross Roads, the other one-teacher school building, is located near the southeast part of the township and not far distant from Bloomington. The erection of an addition to the Ellettsville school building now under way will provide adequate room at that point for the children from the 2 one-teacher buildings, so that the schools of the township can be completely consolidated.

Van Buren.—The schools of Van Buren Township are housed in 7 one-teacher buildings and 2 two-teacher buildings. None of these buildings adequately meets accepted school building standards. Some buildings are very poorly furnished. The Rice school contains desks used in the building over 50 years ago. The Stanford two-teacher building is not very satisfactory for school purposes. Since the roads of the township are in fairly good condition, these buildings could be abandoned and all the schools of the township could be consolidated in 1 building. The high school pupils of this township attend the Bloomington high school and can very well continue to do so.

Indian Creek.—The four-teacher school at Kirksville and 2 one-teacher schools, Clay and Thrasher, make up the physical facilities for schools in Indian Creek Township. The Kirksville school building, erected in 1931, contains 2 basement rooms in which water stands during rainy periods. The 2 rooms on the first floor are satisfactory. The 2 one-teacher schools should be abandoned.

It is quite possible that any program of further consolidation in Indian Creek Township will consider coöperation with the consolidation program of Van Buren Township and the already established schools in Clear Creek Township. Since the roads of the township are fairly well improved it would be possible to eliminate all the schools of the township by transporting the pupils of the northern and western parts of the township to a consolidated elementary center somewhere in Van Buren Township, and taking the pupils in the southern and eastern part of the township to Smithville and Harrodsburg in Clear Creek Township. High school pupils in Indian Creek Township already attend high school at Smithville and should continue to do so.

Washington.—At the time the survey examinations were made the schools of Washington Township were housed in a four-teacher frame building called Consolidated School and a small one-teacher building at Stretcher. The Stretcher building was located in an area so isolated that it could not be reached by auto. During the summer of 1935, the Stretcher school was abandoned, thus completely consolidating the schools of the township. Busses carry the high school pupils of the township to the Bloomington high school.

The Consolidated school building erected in 1928 is a four-unit portable building. However, because of the rough character of the country, the sparse population of the township, and the extension of the State Forest Reserve from the northern and eastern boundaries of the township, it would not seem advisable to improve greatly the present structure or to build permanently on the present site. It is quite likely that the school pupils of the township should in the future be transported from the western part of the township to Stinesville, and from the southern part of the township to a consolidated center somewhere in Bloomington Township.

Bloomington.—The schools of Bloomington Township were housed, at the time the survey was made, in 3 one-teacher buildings, Parks, Payne, and Headley; 3 two-teacher schools, Dolan, Fleener, and Poplar Grove; and 2 four-teacher buildings, Arlington and Hensonburg. However, 1 room of the Hensonburg building was not in use at the time.

The Parks school building was destroyed by fire during the school year 1934-35 and the pupils were transported to the unused room in the Hensonburg building.

All of the buildings are of comparatively recent construction and fairly satisfactory for school purposes. The Headley school, located near Bloomington, is being used as a training school by Indiana University. Arlington and Hensonburg schools are located in the rather densely populated area surrounding Bloomington. The well-improved roads of the township make possible complete consolidation, but such consolidation may not be advisable. The location of densely populated areas around Bloomington and centered along state roads to the northwest, north, and east make separate centers for each area necessary. Furthermore, the above average condition of the buildings of the township and their comparatively recent construction will allow efficient use of present physical facilities for some time to come.

It is likely that at some time in the future there will be need for a consolidated building to the north of Bloomington, perhaps east of state road No. 37 and south of Cascades Park. This building would serve the present areas of Dolan, Payne, Fleener, and Headley and the area of increasing population just outside of Bloomington to the north. It is possible that, by coöperation with Perry Township, the Poplar Grove school would be consolidated with other schools in Perry Township at a center somewhere east of Bloomington and not far from the city limits. Arlington and Hensonburg schools should not be disturbed except to make improvements looking toward the establishment of these schools as permanent centers. The present site at Arlington should be enlarged and leveled to secure a desirable playground for a larger future population. The same precaution should be taken at Hensonburg. Bloomington high school should continue to serve the high school pupils of this township.

Perry.—The picture of the school buildings of Perry Township is somewhat like that of Bloomington Township. The school plant consists of 4 one-teacher buildings, Phillips, Finley, Snoddy, and Dillman; 1 two-teacher building, Handy; 1 three-teacher building, Waterworks; and 4 four-teacher buildings, Sanders, Clear Creek, Broadview, and Hillside Drive. None of the 4 one-teacher schools should be continued. The Dillman school pupils should be transported to Clear Creek and Sanders. The Phillips, Snoddy, and Finley schools should be abandoned and the children transported into Bloomington temporarily. Eventually these 3 schools, together with Poplar Grove in Bloomington Township, and Brummetts Creek and Third Street in Benton Township, and Lampkins and Percifield in Salt Creek Township should be consolidated at a point just east of Bloomington in either Bloomington or Perry Township. Some of these buildings are not very satisfactory for school purposes and the areas served by these schools have improved roads leading to the east part of Bloomington so that transportation could be effected easily. Hillside Drive, Waterworks, and Broadview schools will likely be needed in their present locations for some time to come. Hillside Drive is located near the city and before long may be included within the city limits. The present building is entirely unsatisfactory for school

purposes. The plant is in reality a portable two-unit building with a separate single unit portable located a few feet away. The children of this area deserve better school building facilities. Perhaps the township and the city could reach some sort of agreement that would provide for a large number of pupils within the city limits who are some distance from a city elementary school and for the pupils living outside the city limits but in the area served by the Hillside Drive school. A new build-

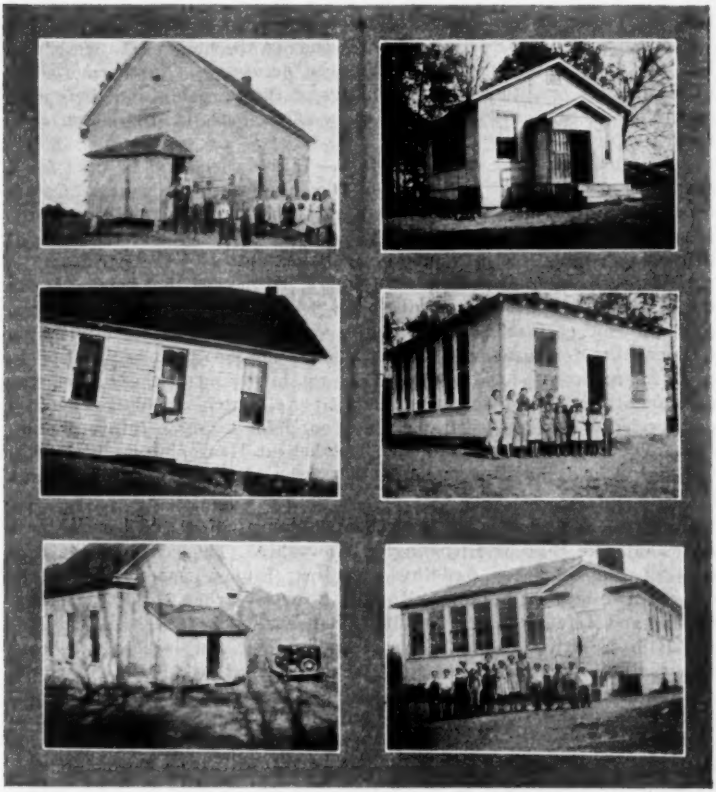


Figure 9. Six of the 42 One-Teacher School Buildings Still in Use in Monroe County.

ing somewhere in this general locality is needed at once. Broadview and Waterworks are well located and efforts should be made to keep these buildings in as good a state of repair as possible. Expansion of the site at both schools seems desirable. Clear Creek should remain as an elementary school center. The building is one of the best in the county,

having been erected in 1929. The playground, however, is in poor condition. Considerable work in leveling and grading the site is necessary to make the playground conform to accepted standards. The Handy two-teacher building is in too poor a state of repair for continued use as a school building. Furthermore, the site is crossed by a county highway, and there is no drinking water available on the site. There is no reason, however, for rebuilding on the present site. The children from this area should eventually be transported to Smithville. At present, however, the Smithville building is not large enough to care for this additional enrollment. The Sanders school, located less than a mile from Smithville, is a recently constructed four-teacher building serving a rather densely populated area. Because of its good condition and substantial construction this building will need to be used for some time to come. It is quite possible, however, that in the future the children attending this school should be transported to Smithville. The high school pupils of the Sanders and Handy districts should continue to be transferred to the Smithville high school. Bloomington high school should continue to serve the high school pupils of the northern part of Perry Township.

Clear Creek.—The schools of Clear Creek Township are housed in an elementary four-teacher building at Harrodsburg in the southern part of the township and a twelve-grade building at Smithville in the northern part of the township. The Harrodsburg building serves very well as a center for the elementary population of the southern part of the township and should serve in part the southeastern section of Indian Creek Township. Obvious repairs in and about the building are necessary. Indoor toilets should be provided and basement rooms should be repaired. The Smithville building is in need of numerous repairs. A more satisfactory water supply should be provided. The most vital building need, however, is an addition that will provide for additional enrollment from Polk, Salt Creek, and Perry townships, and more modern special rooms for high school instruction.

Marion.—Because the State Forest Reserve has included most of the land of Marion Township, only 1 one-teacher building, Honey Creek, remains in the township. An improved road leads almost directly from this school past the Lee school into Unionville. High school pupils are already being transported from the Lee school district to the Unionville high school. It should be easy, therefore, to transfer the children from both the Honey Creek and Lee schools to Unionville.

Benton.—The schools of Benton Township are housed in 5 one-teacher six-grade buildings at Lee, Cox, Third Street, Brummetts Creek, and Unionville; and a six-grade high school building and gymnasium annex at Unionville. As has been indicated in an earlier section of this report, Benton Township is within the purchase area of the Pleasant Run Federal Forest Reserve. It is therefore inadvisable for any new buildings to be erected in the area. A suggested solution to the present problem of providing adequate physical facilities for the township would be the transfer of high school pupils to Bloomington and the conversion of the present building into a consolidated elementary school serving

both Marion and Benton townships. None of the existing buildings in the township is very satisfactory for school purposes, but all will have to be used until adequate building facilities are provided.

Salt Creek and Polk.—Since the areas of Salt Creek and Polk townships are similar in character and are included in the purchase area of the Pleasant Run Federal Forest Reserve, the buildings of the two townships will be considered. The Salt Creek Township schools are housed in 6 one-teacher buildings and Polk Township schools in 9 one-teacher

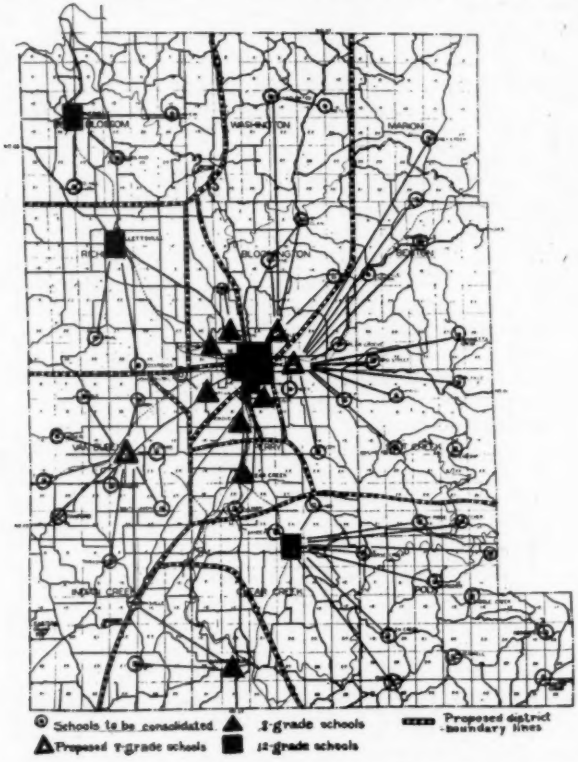


Figure 10. Proposed Consolidation of Schools in Monroe County.

buildings. The Percifield and Lampkins schools can be transported to Bloomington or to the suggested consolidated center just east of Bloomington. The Knight Ridge school can be maintained at its present site until the purchase program is well on its way, after which the children from the district may be transferred to the center east of Bloomington. The Rush, Butcher, Todd, Blackwell, Burgoon, Moores Creek, Allen Creek, and Chapel Hill schools may be abandoned and the

children transported to Smithville. The Saddle Creek, Friendship, Robertson, and Hunter Creek schools will have to be abandoned or consolidated as the number of children enrolled decreases with the development of the purchase program. Meanwhile residents in these two townships will have to content themselves with making the children as comfortable as possible in the buildings now existing, however poor and unfit for school purposes the buildings may be.

Summary for the County.—When the program of consolidation proposed in the discussion of the schools of the various townships is completed, the school map of the county would appear as in Figure 10. Twelve-grade schools would be located at Ellettsville, Stinesville, and Smithville. Eight-grade buildings would be located at the present sites of Harrodsburg, Clear Creek, Broadview, Waterworks, Hillside Drive, Arlington, and Hensonburg. In addition there would be established 3 new eight-grade schools, 1 in Van Buren Township, 1 just north of Bloomington, and 1 just east of Bloomington. Thus 10 elementary buildings and 3 consolidated elementary and high school buildings would provide for all the children of the county and would at the same time eliminate many unsanitary and unsatisfactory school buildings now being used. Such a program of consolidation and school building improvement carried out over a period of five to ten years would without doubt raise appreciably the level of educational achievement of the school children in the county and at the same time effect desirable economy in school finances.

CHAPTER VI
THE ADMINISTRATIVE ORGANIZATION

THE organization of administration of the schools of Monroe County is typical of Indiana. A township trustee is elected every four years in each of the 12 townships of the county. Each trustee has complete control of the schools within his township, subject to two types of state control and regulation. The first type is mandatory for all schools of the state and takes form in teacher certification, safety and sanitary laws and regulations, salary laws, recording and reporting, uniform textbook regulations, etc. The second type of control is voluntary on the part of the township trustee. The township trustee, in return for certain benefits granted by the state, must conform to a set of regulations governing the benefits if he accepts them. Regulations of the type indicated govern such benefits as the granting of a commission to a high school, financial assistance for the teaching of vocational subjects, financial assistance for substandard schools, assistance for school units financially unable to provide a minimum educational program, etc.

The township trustees of the county, together, form the County Board of Education, one duty of which is to select the county superintendent of schools. The County Board of Education may meet and agree upon certain policies and procedures, but there is no authority for the enforcement of the agreements made. The county superintendent of schoo's has little real authority. He may reject the appointment of teachers by township trustees if the teachers are not provided with proper teaching certificates. He awards teachers' success grades and calls county teachers' meetings. He sends to the state certain reports on the condition of the county schools and he receives from the township trustees certain reports concerning the schools of the townships.

Although the law does not give the county superintendent much real power, nevertheless, in many counties, including Monroe County, the county superintendent is the educational leader of the county and directs rather effectively the educational program of the county schools.

The township trustees of the county are to be commended for their voluntary coöperation with one another and with the county superintent to the end that the schools of the county may be operated efficiently and economically. There is continued need for such sincere coöperation. Furthermore, greater coöperation may help to solve some of the difficult problems facing the school authorities of the county.

For example, bookkeeping and the making of reports is more or less a technical process and one not thoroughly enjoyed by the average township trustee. The trustees might combine their clerical assistance allotment and employ with the amount a full-time clerk to be in charge of the bookkeeping of all townships. This clerk could be located in the county superintendent's office, and could work under the supervision of the county superintendent.

Quantity buying of school supplies usually enables the purchaser to

secure lower prices. If the supply needs of the 12 townships were combined into a single order it is quite likely that the annual cost of supplies could be materially reduced because of lower quotations on quantity purchases and higher discounts for large orders.

Careful study of transportation routes by trustees of adjoining townships and a generous granting of transfers might result in considerable saving through the elimination of duplicating bus routes and the reduction of transportation costs.

Through coöperation of all the trustees the superintendent's system of supervision for the schools of the county might be improved at a cost within the means of every township. The problems of teacher personnel — selection, placement, salary, promotion, in-service training, and tenure—may be alleviated through the coöperative efforts of the various trustees.

It is by such voluntary activities as have been indicated that the schools of a county may be improved and the costs held at a minimum without disturbing in the least the position of the township trustee.

In some cases it may seem desirable for two or more townships to have a closer relationship than voluntary coöperation in order to administer the educational program most satisfactorily. In such cases joint schools may be established and operated. Under the provisions of the joint school laws for Indiana two or more adjoining townships may combine in the erection and operation of school buildings. Such schools are administered by a board of control composed of the trustees of the townships involved. For example, the 4 townships, Benton, Bloomington, Perry, and Salt Creek, could unite in the erection and operation of a consolidated school located a short distance east of Bloomington on state road No. 46. This consolidated school, proposed in Chapter V, could serve the children of the 4 townships, and could be operated by a board of control composed of the trustees of the 4 townships.

It is conceivable that this principle of joint operation might in some cases be made to apply to all the schools of a county with the entire group of township trustees functioning as a board of control and operating under the provisions of the laws regulating joint schools. A combination of townships such as has just been indicated is being discussed by the trustees of Madison and Marion counties.

Since the tier of 4 townships on the eastern border of Monroe County is entirely within state and federal forest purchase areas it is evident that if purchases are continued the territory under township control will be reduced and eventually there will be little need for separate township government of these areas. It would be well to make plans in advance for the consolidation of these township areas with other townships when and if the area under township control falls below a desirable minimum. Wise planning of the educational program of the eastern part of Monroe County will be contingent upon the consideration of area consolidations.

The financial administration of the schools of Monroe County is important, as it is in many of the counties in southern Indiana, partially because sufficient income cannot be derived from local sources to support what the state has set up as a minimum educational program and there-

TABLE XIV. TOTAL NET VALUE OF TAXABLES IN EACH TOWNSHIP IN MONROE COUNTY FOR 1929 AND 1930 *

Township	1929	1933
Bean Blossom	$1,198,560	$833,050
Benton	575,325	416,260
Bloomington	2,523,650	1,815,600
Clear Creek	1,534,980	1,031,475
Indian Creek	706,380	492,180
Marion	148,960	83,140
Perry	4,639,105	3,655,885
Polk	160,115	126,290
Richland	1,712,345	1,105,845
Salt Creek	212,560	194,795
Van Buren	1,279,750	888,850
Washington	416,765	332,440
Total	$15,111,495	$10,975,810

* This table and all other tables in this chapter do not include the part of Bloomington and Perry townships which is within the limits of the city of Bloomington.

fore state aid must be provided. A total net value of taxables for the townships of the county of $10,975,810 in 1933 must, if state aid is not received, provide for the education of 3,992 pupils in Grades 1 to 8, for the education of all high school pupils, and in addition for all the other governmental activities of the townships. Furthermore, the data presented in Table XIV show that this total net value of taxables has declined rapidly since 1929 in every township in the county, the 1933 value for the county as a whole being only 72 per cent of the 1929 value. Likewise the amount of taxable wealth back of each elementary child enrolled, according to Table XV, has decreased over the same period of time in every township, the decrease for the county as a whole being 30 per cent of the 1929 amount. Furthermore, mandatory economies brought on by the depression served to force downward the total tax rate in every township. According to Table XVI the tax levy in every township in 1933 was lower than the peak reached in 1929 and, with two exceptions, lower than tax levies of 1924. School levies likewise, according to Table XVII, were much lower in 1933 than in 1929 and with three exceptions were lower in 1933 than in 1924.

With a combination of decreased valuations and decreased tax rates and with a slightly increasing school population, it is clearly evident that per pupil costs of instruction would have to be reduced drastically or state support would have to be forthcoming. Table XVIII shows that the per pupil costs in the elementary schools were reduced in 10 of the 12 townships from 1929 to 1933 and that the average elementary school per pupil cost for the county as a whole was reduced from $46.46 in 1929 to $35.36 in 1933, a reduction of 24 per cent in the four-year period. Meanwhile, according to Table XIX, the state aid received by the town-

ships increased from $67,116.89 in 1929 to $95,713.64 in 1933, an increase of approximately 43 per cent in the four-year period. This increase in state support is more significant when it is observed from Table XX that the per cent of the school expenditures of each township met by state aid increased from 1929 to 1933, the increase for the county as a whole being from 17 per cent in 1929 to 32 per cent in 1933. From the data

TABLE XV. TAXABLE WEALTH BACK OF EACH ELEMENTARY SCHOOL CHILD ENROLLED IN EACH TOWNSHIP IN MONROE COUNTY FOR 1928-29 AND 1932-33, BASED UPON VALUATIONS AND ENROLLMENTS OF SIMULTANEOUS PERIODS

Townships	1928-29	1932-33
Bean Blossom	$4,390.33	$3,204.04
Benton	2,568.42	1,440.35
Bloomington	5,301.79	3,174.13
Clear Creek	2,765.73	2,393.21
Indian Creek	3,924.33	2,121.47
Marion	3,819.49	2,866.90
Perry	4,929.97	3,872.76
Polk	588.66	534.62
Richland	4,530.01	3,252.49
Salt Creek	1,372.99	1,025.24
Van Buren	4,011.76	2,718.20
Washington	2,760.03	1,560.75
County	$3,870.44	$2,726.23

TABLE XVI. TOTAL TAX LEVIES FOR EACH TOWNSHIP IN MONROE COUNTY FOR 1924, 1929, AND 1933

Township	1924	1929	1933
Bean Blossom	$3.32	$3.44	$2.62
Benton	3.40	3.61	2.94
Bloomington	2.30	2.92	2.40
Clear Creek	3.40	3.96	2.84
Indian Creek	3.46	3.25	3.06
Marion	3.30	3.70	2.49
Perry	2.00	2.68	2.46
Polk	3.36	3.45	3.26
Richland	3.16	3.44	2.77
Salt Creek	3.32	3.15	2.78
Van Buren	3.12	3.17	1.81
Washington	2.86	3.45	2.67

presented it is clear that for a minimum educational program to be continued for the children of Monroe County, state aid will continue to be necessary in spite of all attempts to reduce costs through the exercise of the most rigid economies.

TABLE XVII. TOWNSHIP SCHOOL LEVIES FOR EACH TOWNSHIP IN MONROE COUNTY FOR 1924, 1929, AND 1933

Township	1924	1929	1933
Bean Blossom	$1.32	$1.70	$1.02
Benton	1.47	1.76	.78
Bloomington	.88	1.57	1.09
Clear Creek	1.55	2.20	1.00
Indian Creek	1.15	1.37	.99
Marion	1.36	1.50	.74
Perry	.50	1.29	1.09
Polk	1.50	1.35	.85
Richland	1.18	1.78	1.345
Salt Creek	1.20	1.40	.75
Van Buren	1.14	1.38	.60
Washington	1.20	1.75	.67

TABLE XVIII. ANNUAL COST PER PUPIL ENROLLED IN THE ELEMENTARY SCHOOLS IN EACH TOWNSHIP IN MONROE COUNTY FOR 1928-29 AND 1932-33

Township	1928-29	1932-33
Bean Blossom	$50.26*	$40.70*
Benton	31.00	29.53*
Bloomington	67.48	40.64
Clear Creek	63.36*	31.59
Indian Creek	53.20	37.43
Marion	69.00	47.63*
Perry	31.00	33.15
Polk	32.00	59.43
Richland	38.00	32.09
Salt Creek	43.00	32.60
Van Buren	48.00	33.09
Washington	65.00	39.86
County	$46.46	$35.36

* Grades 1 to 6 only.

TABLE XIX. STATE AID RECEIPTS* IN EACH TOWNSHIP IN MONROE COUNTY FOR 1929 AND 1933

Township	1929	1933
Bean Blossom	$ 6,806.43	$ 9,852.02
Benton	8,845.71	14,008.03
Bloomington	.....	10,181.96
Clear Creek	21,480.84	17,659.51
Indian Creek	4,820.86	3,327 80
Marion	1,273.09	1,335.82
Perry	.....	.....
Polk	4,115.91	8,573.62
Richland	.....	.....
Salt Creek	4,719.43	8,829.74
Van Buren	6,411.94	11,342.20
Washington	8,642.68	10,602.94
Total	$67,116.89	$95,713.64

* State aid as reported to the county superintendent by the trustee of each township.

TABLE XX. PER CENT OF EXPENDITURES MET BY STATE AID* IN EACH TOWNSHIP IN MONROE COUNTY FOR 1929 AND 1933

Township	1929	1933
Bean Blossom	19	42
Benton	14	67
Bloomington	.....	24
Clear Creek	32	33
Indian Creek	28	25
Marion	30	71
Perry	.....	.....
Polk	40	72
Richland	.....	.....
Salt Creek	56	88
Van Buren	19	44
Washington	34	68
County	17	32

* State aid as reported to the county superintendent by the trustee of each township.

The distribution of the expenditures for schools among the various divisions of the budget seems to be very satisfactory for the county as a whole. Table XXI shows that Monroe County compares very favorably, not only with adjoining counties, but with the state as a whole.

TABLE XXI. PER CENT OF EXPENDITURES IN SCHOOL TOWNSHIPS UNDER DIFFERENT DIVISIONS OF THE BUDGET—COMPARING MONROE COUNTY WITH ADJACENT COUNTIES AND WITH THE STATE OF INDIANA FOR 1932-33

Budget Divisions	Brown County	Greene County	Lawrence County	Monroe County	Morgan County	Owen County	Indiana
Instruction	48.7	62.5	54.1	48.0	43.9	46.5	49.2
Operation	25.8	18.0	23.7	24.0	23.3	26.1	22.3
Maintenance	2.5	2.6	2.5	3.4	2.8	2.1	2.6
Fixed charges	1.0	4.2	4.1	3.5	3.5	3.2	4.8
Auxiliary activities	.1	.7	.....	.1	.1	.....	.3
Transfer tuition	8.8	6.3	8.3	11.9	17.6	6.8	8.2
Debt service and other outlay	11.4	4.5	5.6	6.9	4.9	11.2	10.1
Capital outlay	1.7	1.2	1.7	2.2	3.9	4.1	2.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

There is one point in connection with the financing of education, however, which the people of the county and the school officials should have brought forcibly to their attention. The state has operated in good faith through state aid to equalize educational opportunity. The people of the county through their school officials have accepted the state support based upon this equalization principle. But no attempt has been made within the county to equalize the local tax burden among the various townships. There existed in 1933 within the county, township tax levies in adjacent townships varying from $1.81 in Van Buren Township to $3.06 in Indian Creek Township; and school tax levies in adjacent townships varying from $.60 in Van Buren Township, operating with the assistance of state school relief, to $1.34½ in Richland Township, operating entirely on a local taxation basis. In other words in adjoining townships the citizen of one township paid more than twice as much on the same amount of taxable property as did the citizen of the other in support of the educational program of the township. Operation of the schools of the county on a joint basis would make possible the establishment of a uniform school tax rate for the county and thus carry out the principle of equalization within the county that has been attempted in the state.

CHAPTER VII
THE DAILY PROGRAM

ONE of the important problems in connection with the one-teacher school is the making of a satisfactory daily program before school begins in the fall. Certain very definite principles should be followed in this task if a successful and efficient program is to result. In the first place the program must provide for the proper amount of work in each subject required of the child by the educational authorities of the state. Each child should have 4 or 5 recitation periods per day in order to secure a fair share of the teacher's time and personal instruction. Very few of the programs of the schools of Monroe County fail in this respect.

If there are 8 grades in the school and each pupil is assigned to 5 recitation periods per day, the teacher will be called upon to teach 40 different classes each day, far too great a number of recitations for efficient teaching. The problem, then, becomes one of reducing recitations through a combination of grades, an alternation of subjects, or both. Of 30 one-teacher schools in the county where definite time schedules of the traditional type were in use, only 1 school had fewer than 20 recitations per day, 1 had exactly 20 recitations per day, and the remaining 28 schools had from 21 to 35 classes each day with a median of 26. This same group of 30 schools had an attendance of 872 pupils, an average of 29 pupils per school, and an average of 6.5 grades per school.

Table XXII shows a direct relationship between the number of classes per day and the number of grades represented. If certain grades could be combined, a considerable reduction in the number of grade

TABLE XXII. RELATION OF NUMBER OF CLASSES PER DAY TO NUMBER OF GRADES IN 30 MONROE COUNTY ONE-TEACHER SCHOOLS HAVING TRADITIONAL TYPE DAILY PROGRAMS *

Number of Grades	Number of Schools	Range in Number of Classes per Day	Median Number of Classes per Day
8	8	26–35	30
7	6	24–31	27
6	9	20–28	24
5	6	19–24	23
4	1	21	21
Total	30	19–35	26

* This table is read as follows: Of the 30 schools, 8 had all 8 grades represented and a range of from 26 to 35 classes per day, with a median of 30 classes per day; 6 schools had only 7 grades represented with a range of from 24 to 31 classes per day; etc.

TABLE XXIII. DISTRIBUTION OF CLASS SIZE IN THE 43 MONROE COUNTY ONE-TEACHER SCHOOLS *

Size of Class	Grade								All Grades
	1	2	3	4	5	6	7	8	
0	.....	1	7	6	4	5	11	13	47
1	4	2	4	.....	2	2	4	4	22
2	3	8	7	3	8	8	6	6	49
3	6	6	7	5	7	7	7	6	51
4	6	3	5	8	6	7	1	4	40
5	10	6	4	11	6	5	3	4	49
6	2	6	1	5	6	3	4	.....	27
7	3	3	4	.....	1	3	1	.....	15
8	3	4	1	2	2	1	.....	.....	13
9	2	1	1	2	.....	2	.....	.....	8
10	.....	1	1	1	1	.....	.....	.....	4
11	2	1	.....	.....	.....	.....	.....	.....	3
12	1	1	1	.....	.....	.....	.....	.....	3
13	.....	.....	.....	.....	.....	.....	.....	.....	.....
14	.....	.....	.....	.....	.....	.....	.....	.....	.....
15	.....	.....	.....	.....	.....	.....	.....	.....	.....
16	1	.....	.....	.....	.....	.....	.....	.....	1
Total	43	43	43	43	43	43	37†	37†	332
Median	5	5	4	5	4	4	3	3	4

* This table is read as follows: In the 43 one-teacher schools of the county all have first grades, 1 has no second grade, 7 have no third grade, 6 have no fourth grade, etc.; 4 have first grades with 1 pupil, 2 have second grades with 1 pupil, etc.; 3 have first grades with 2 pupils, 8 have second grades with 2 pupils, etc.

† Six schools, Unionville, Brummetts Creek, Cox, Lee, Third Street, and Honey Creek send all seventh and eighth grade pupils to Unionville.

groups and an increase in class size would result. An illustration will show the effect of a county-wide program of grade combinations. Let us suppose that Grades 3 and 4, Grades 5 and 6, and Grades 7 and 8 were combined. Let us assume that on even numbered years the work of the fourth, sixth, and eighth grades were given; and on odd numbered years the work of the third, fifth, and seventh grades were given. If such combination of grades had been made in the 43 one-teacher schools of the county the number of grade groups would have been reduced from 285 (Table XXIII) to 199 (Table XXIV), or from an average of 6.5 grade groups per school to an average of 4.5 grade groups per school. Tables XXIII and XXIV also point out that the combinations of grades would increase the median class size from 4 pupils per grade group to 6 pupils per grade group.

An inspection of the daily programs of the one-teacher schools of the county shows that 84 grade groups for specific subjects have been reduced to 41 class groups in those subjects in accordance with the data presented in Table XXV.

Of course it should be understood that the opening exercise period

and the writing period, in which the entire school participates are not included in the summary of combinations given in Table XXV. It should be understood also that, while some schools have a considerable number of grade combinations, others have little or none. One school included in the tabulation of data for Table XXV had 7 cases of grade combinations indicated on the daily program.

It has been pointed out that there were 285 grade groups in the 43 one-teacher schools. If each grade group were allotted 5 teaching periods per day, a total of 1,425 teaching periods per day would be represented. By the combining of grades the number of grade groups was reduced in the 43 one-teacher schools in the county by 43, as indicated in Table XXV. By the program of combinations used in the illustration the number of teaching periods could be reduced to 995, a decrease of 30 per cent.

The program of grade combinations used in the illustration is not

TABLE XXIV. DISTRIBUTION OF CLASS SIZE IN THE 43 MONROE COUNTY ONE-TEACHER SCHOOLS IF GRADES 3 AND 4, 5 AND 6, AND 7 AND 8 WERE COMBINED

Size of Class	Grade					Total
	1	2	3 and 4	5 and 6	7 and 8	
0	.....	1	3	.....	6	10
1	4	2	.....	.....	2	8
2	3	8	1	2	5	19
3	6	6	2	1	2	17
4	6	3	2	5	2	18
5	10	6	3	3	6	28
6	2	6	5	6	7	26
7	3	3	7	7	2	22
8	3	4	4	6	2	19
9	2	1	3	3	1	10
10	.....	1	4	5	2	12
11	2	1	2	1	.....	6
12	1	1	3	1	.....	6
13	.....	.....	.....	1	.....	1
14	.....	.....	.....	.....	.....	.....
15	.....	.....	3	1	.....	4
16	1	.....	.....	1	.....	2
17	.....	.....	.....	.....	.....	.....
18	.....	.....	.....	.....	.....	.....
19	.....	.....	.....	.....	.....	.....
20	.....	.....	.....	.....	.....	.....
21	.....	.....	.....	.....	.....	.....
22	.....	.....	1	.....	.....	1
Total	43	43	43	43	37	209
Median	5	5	7	7	5	6

TABLE XXV. NUMBER OF GRADE COMBINATIONS INDICATED BY THE DAILY PROGRAMS OF THE MONROE COUNTY ONE-TEACHER SCHOOLS

Grades Combined	Number of Times Combination is Indicated	Grades Combined	Number of Times Combination is Indicated
1 and 2	6	5 and 6	7
2 and 3	3	6 and 7	2
3 and 4	6	6, 7 and 8	1
3, 4 and 5	1	7 and 8	9
4 and 5	5		
4 and 6	1	Total	41*

* These 41 grade combinations listed reduce the total number of grade groups by 43 since in two cases 3 grades are combined in 1 grade group.

presented as a recommended program but only as a means of illustrating the effect of the application of such a program on the number and size of grade groups. It is recommended, however, that some means be taken to insure the most effective allotment of the teacher's time in terms of individual pupil needs.

The principle of grade combinations should prove beneficial in two-, three-, and four-teacher schools as well as in the one-teacher schools, although there is not such great urgency for the combination in the larger schools as in the one-teacher schools.

A second method of combination can be used with profit in the construction of the daily program, especially in the one-teacher school—that of combining subjects within the same period, such as, for example, from 1:35 to 1:50, history on Monday, Wednesday, and Friday, and geography on Tuesday and Thursday.

Considerable use has been made of this type of combination in the daily programs of the one-teacher schools of the county. A further extension of the idea of subject combinations is expressed in the principle of correlation of subjects about certain major subject fields. Few programs of those in use in the county show evidences of such correlation although there seems to be a tendency to combine subjects belonging to the same subject group without, however, destroying the identity of the subjects combined. For example, history and geography are often combined in the same period, but with history given 3 days per week and geography 2 days per week. Seldom are the 2 subjects found combined as social science and given as such 5 days per week. Many times unrelated subjects are combined in the same class period as, for example, language and hygiene, English and history, geography and hygiene, etc.

Table XXVI shows the frequency of subject combinations by grades, and Table XXVII shows the number of times each subject was combined with some other subject in each grade. The most popular subjects for combination were found to be history, geography, hygiene, and language,

these 4 subjects accounting for a total of 173 of the 394 combinations when combined with one another and 172 additional combinations when combined with other subjects. In all, 315 of the 394 combinations were accounted for by the 3 subjects, geography, history, and hygiene.

It will be noted that language, reading, spelling, English, and writing (all phases of general English work) are included in this study of daily programs. When English was given on the daily program it was meant sometimes to cover language and spelling, and sometimes to cover reading and spelling. Sometimes it was not possible to discover what

TABLE XXVI. FREQUENCY OF SUBJECT COMBINATIONS BY GRADES IN 43 MONROE COUNTY ONE-TEACHER SCHOOLS *

Subject Combinations	Grade								Total
	1	2	3	4	5	6	7	8	
Geography—hygiene	1	1	5	12	11	12	9	7	58
History—language	....	....	6	8	7	9	5	5	40
History—reading	....	....	6	7	7	8	5	6	39
History—geography	....	....	7	6	9	9	4	1	36
Spelling—hygiene	1	1	5	5	6	5	4	2	29
Spelling—geography	1	1	5	4	3	4	2	2	22
Language—geography	1	1	4	2	3	4	3	2	20
Reading—language	3	5	5	2	2	1	1	1	20
Language—hygiene	....	....	2	3	5	5	2	1	18
Arithmetic—hygiene	....	....	1	2	2	2	2	2	11
English—geography	....	....	2	2	2	2	2	1	11
History—civics	....	....	....	....	....	1	5	5	11
Reading—spelling	3	2	1	1	1	....	1	....	9
Spelling—writing	1	1	1	1	1	2	1	1	9
Language—spelling	....	3	1	1	1	1	....	....	7
Reading—civics	....	....	....	1	....	1	3	2	7
English—reading	....	1	....	1	....	1	2	2	7
History—English	....	....	1	1	2	2	....	....	6
Reading—writing	2	1	1	1	1	....	....	....	6
History—spelling	....	....	....	1	1	1	1	1	5
English—writing	....	1	....	1	....	1	1	1	5
Reading—hygiene	....	....	1	1	....	1	1	1	5
English—spelling	....	....	1	1	....	....	1	1	4
English—hygiene	....	....	1	1	1	....	....	1	4
Language—civics	....	....	....	....	....	....	1	1	2
History—hygiene	....	....	....	....	....	1	....	....	1
Reading—general science	....	....	....	....	....	....	....	1	1
Spelling—arithmetic	1	....	....	....	....	....	....	....	1
All Combinations	14	18	56	65	65	73	56	47	394

* This table is read as follows: In the 43 one-teacher schools of the county 1 school combined geography and hygiene in the first grade, 1 in the second grade, 5 in the third grade, 12 in the fourth grade, etc.

TABLE XXVII. NUMBER OF TIMES EACH SUBJECT IS COMBINED IN THE SAME CLASS PERIOD WITH OTHER SUBJECTS IN THE DAILY PROGRAMS OF 43 MONROE COUNTY ONE-TEACHER SCHOOLS *

Subject	Grade								Total
	1	2	3	4	5	6	7	8	
Geography	3	3	23	26	28	31	20	13	147
History	....	....	20	23	26	31	20	18	138
Hygiene	2	2	15	24	25	26	18	14	126
Language	4	9	18	16	18	20	12	10	107
Reading	8	9	14	14	11	12	13	13	94
Spelling	7	8	14	14	13	13	10	7	86
English	....	2	5	7	5	6	6	6	37
Civics	....	....	....	1	....	2	9	8	20
Writing	3	3	2	3	2	3	2	2	20
Arithmetic	1	....	1	2	2	2	2	2	12
General science	....	....	....	....	....	....	....	1	1
All Subjects	28	36	112	130	130	146	112	94	788

* This table is read as follows: In the 43 one-teacher schools of the county 3 schools combined geography with some other subject in the first grade, 3 in the second grade, 23 in the third grade, etc.

was included in the term "English." There is considerable evidence that in this general field there has been greater effort than in any other general field to combine the various phases of the field into one program subject.

"Social studies" is found on the programs of the 43 one-teacher schools but twice. There is some indication that in the lower grades, health, hygiene, and natural science have been combined or considered as a unit field.

It seems that with little difficulty all phases of English might be combined and treated as an English unit in the program; that history, geography, and civics might be combined and treated as a social science unit in the program; and that, in this fashion, the number of class groups could be reduced materially and the class period lengthened correspondingly. It is highly desirable that teachers, in planning their daily programs in the one-teacher schools of the county as well as in the larger schools, follow the suggestions given by the state in the grouping of elementary school subjects.[1]

Another very important principle in the successful construction of a daily program has to do with the time element. The various subjects on the school program are not of equal importance. Some subjects are more time-consuming than others when they are considered from the

[1] *Program of Studies and Digest of State Courses of Study for Indiana Schools.* Supplement to Bulletin 100 (rev.), Indiana State Department of Public Instruction, Indianapolis, 1933, p. 4.

point of view of instruction. The size of the class group is rather important in the determination of the class period length. A group of two may not require as long a class period as a group of 10. The age of the pupils in the class group is also important, for older children, it is thought, can efficiently attend to the work at hand for a longer period than can younger children. The state has set up a table of suggested time allotments for the first six grades of the elementary school for each of the subject groups.[2] These weekly time allotments include time for both study and class periods for each subject and therefore do not apply directly to the scheduling of class periods. The table of values, however, can be used as a guide in indicating the relative amount of time to be devoted to the class groups in the daily schedule under normal conditions.

It must always be remembered, however, that the daily program must be unique for any particular school and must concern itself with the program adjustments peculiar to that school. If, through a testing program, a school has been found to be well above normal in mathematics but far below standard in English, then the program of studies should be adjusted so that extra time is allotted to the study of English, the extra time being secured at the expense of the mathematics class periods.

The daily programs of the schools of the county were investigated to discover practices in time allotments for grades and for subjects. One of the most outstanding observations in connection with time allotments is the great variation in time devoted to the same subjects in the same grade and the disproportion of time allocated to various subjects. In 58 first grades of the county one first grade received just 50 minutes per week (10 minutes per day) in reading class periods. In another first grade 400 minutes per week (one hour and 20 minutes per day) were devoted to reading class periods. In an eight-months' term the first group could have received a maximum of 27 hours of class work in reading, and the second group could have received a maximum of 213 hours, just 8 times as long a period.

There is one factor which might serve to compensate for the variation in time devoted to any subject. It is possible that one teacher can achieve greater learning results in a class group by giving 50 minutes of her time per week than another teacher with different teaching methods could achieve by giving 400 minutes of her time per week. Differences in the mentality of the class group or level of previous achievement or size of class group or teaching method used might serve to require 50 minutes per week in one school and 400 minutes per week in another.

Each teacher should study carefully the daily program in use to see that each grade and subject allotment of time can be justified in the light of the needs of the pupils served by the school. That such justification cannot be given by many of the teachers of the county is clearly indicated by an inspection of the programs in use. In many programs the class periods are uniformly 10 and 15 minutes in length regardless of the size of the class group, the age of the pupils forming the class group, the subject taught during the period, or the mentality of the members of the group. Few programs in either the one-teacher or the larger schools show differences in time allotments which would indicate that adjust-

[2] *Ibid.*, p. 4.

TABLE XXVIII. DAILY PROGRAM OF A ONE-TEACHER SCHOOL IN MONROE COUNTY

Forenoon				Afternoon			
Time	Subject	Grade	Number in Class Group	Time	Subject	Grade	Number in Class Group
8:30	Opening exercises....	All	35	12:00	Noon.....	All	35
8:35	Reading.....	1	4	1:00	Reading.....	1	4
8:45	Reading.....	2	8	1:10	Language....	2	8
8:55	Reading.....	3	3	1:20	Language....	3	3
9:05	Reading.....	4	4	1:30	Language-Geography *	4	4
9:15	Reading.....	5	3	1:40	Language-Geography..	5	3
9:25	Reading.....	6	7	1:50	Language-Geography..	6	7
9:35	Reading.....	7	2	2:00	Language-Geography..	7	2
9:45	Reading.....	8	4	2:10	Language-Hygiene....	8	4
10:15	Recess.....	All	35	2:20	Recess.....	All	35
10:30	Arithmetic....	1	4	2:35	Reading.....	1	4
10:40	Arithmetic....	2	8	2:45	Spelling.....	2	8
10:50	Arithmetic....	3	3	2:55	Spelling.....	3	3
11:00	Arithmetic....	4	4	3:15	History-Spelling*...	4	4
11:10	Arithmetic....	5	3	3:25	History-Spelling....	5	3
11:20	Arithmetic....	6	7	3:35	History-Spelling....	6	7
11:30	Arithmetic....	7	2	3:45	History-Spelling....	7	2
11:40	Arithmetic....	8	4	3:55	History-Spelling....	8	4
11:50	Writing.....	All	35	4:05	Dismissal.....	All	35

* Language is given 3 days per week and geography 2 days per week; history is given 3 days per week and spelling 2 days per week.

ments for variations have been made. However, there is apparent the tendency in the upper grades to make the arithmetic periods slightly longer than other periods and spelling periods slightly shorter than other periods.

Table XXVIII presents a typical daily program of one of the one-teacher schools. Recess periods are 15 minutes in length, the reading class of 4 pupils in the eighth grade is allotted 30 minutes, the spelling

class of 3 in the third grade is given 20 minutes, all other classes are given 10 minutes each. The size of class, the importance of the subject, and the grade level of pupils do not justify the additional allotment of time in the two instances indicated. When the mentality and achievements of the various grade groups are compared, it is found that the average intelligence quotient for the third grade is 79 as compared with 99 in the fourth grade, 106 in the fifth grade, 99 in the sixth grade, and 96 in the eighth grade. The 2 seventh grade pupils were absent on the day the tests were given. There seems, from these data, to have been some justification for an increased allotment of time for the third grade but none for the eighth grade whose average intelligence quotient was 96, the same as the average for the entire school.

If the accomplishment ratios are considered it is found that, although the third grade had an average intelligence of only 79, yet the achievement in this grade was 97 per cent of what could be reasonably expected. The accomplishment ratios for the other grades were 94 for the fourth grade, 83 for the fifth grade, 84 for the sixth grade, and 87 for the eighth grade. In other words, from the standpoint of the accomplishment ratio, the third grade was superior to the other grades in the school, and the fifth and sixth grades were really the groups which were in need of special attention.

The program just presented (Table XXVIII) is given, not to reflect upon any one school of the county, but to indicate the survey material

TABLE XXIX. ROTARY PROGRAM WITH FIXED SUBJECT PERIODS AND GRADE ROTATION* IN A ONE-TEACHER SCHOOL IN MONROE COUNTY

Forenoon			Afternoon		
Time	Subject	Grade	Time	Subject	Grade
8:30	Opening exercises	All	12:00	Noon	All
8:45	Reading	1, 2, 4, 6, 7, 8	1:00	Reading	1
10:00	Geography-History	4	1:15	English	2, 4, 6, 7, 8
10:15	Rest	All	2:30	Rest	All
10:30	Arithmetic	1, 2, 4, 6, 7, 8	2:45	Spelling	1, 2, 4, 6, 7, 8
			3:15	Geography-History	6, 7, 8

* At 8:45 this rotary program is begun by the teacher, having classes in reading beginning with the first grade but with no fixed length of class period. When 10 o'clock comes the work in reading is stopped at whatever point the work has progressed, say with the sixth grade. On the following day at 8:45 the work in reading begins with the seventh grade. When the eighth grade class is over, the classes begin with the first grade again. This rotation of grade classes in reading is continued throughout the week or month. In each of the other rotary periods during the day the same procedure is followed.

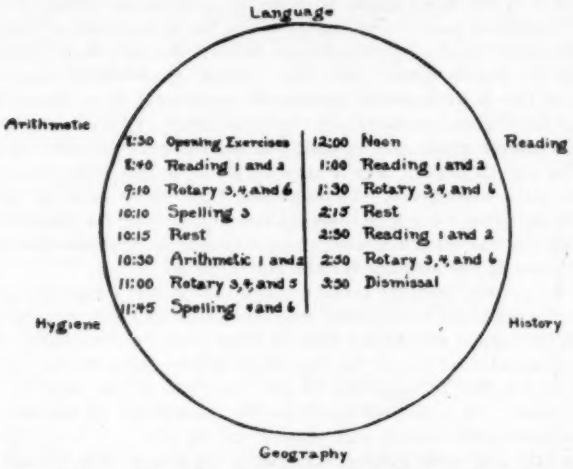


Figure 11. Rotary Daily Program with Fixed Rotary Periods and Subject Rotation in a One-Teacher School in Monroe County.

This program is administered as follows (Grades 5, 7, and 8 are not present in this school): On the first day of the term language classes for Grades 3, 4, and 6 are held from 9:10 to 10:10, reading from 11:00 to 11:45, history from 1:30 to 2:15, and geography from 2:50 to 3:30; on the second day hygiene classes are held from 9:10 to 10:10, arithmetic from 11:00 to 11:45, language from 1:30 to 2:15, and reading from 2:50 to 3:30; on the third day history classes are held from 9:10 to 10:10, geography from 11:00 to 11:45, hygiene from 1:30 to 2:15, and arithmetic from 2:50 to 3:30. On the fourth day the rotation of classes begins again as it did on the first day.

now available to the teacher which can be used in the allotment of time to various groups and subjects in the construction of the daily program. Program making should not be a careless and haphazard task. The program should be scientifically designed and wisely administered to secure a fair and proper balance in the benefits of instruction.

One other principle in the construction of the daily program needs to be mentioned only to indicate its common acceptance and application in the programs of the county. Subjects requiring muscular control should not be scheduled to follow physical activity periods.

Writing and drawing should not come immediately after a period of play. Few daily programs in use in the county have disregarded the adjustment to the physical needs of the child and their relationship to effective work and study.

In 13 classrooms of the county rotary programs were found in use—10 in one-teacher schools, 1 in a two-teacher school, and 2 in four-teacher schools. Two types of rotary programs are represented, 1 in which the rotary periods are fixed at a certain time of the day with subject-grade rotation and 1 in which the subject periods are fixed with grade rotation within the period. Table XXIX shows an example of the former type and Figure 11 an example of the latter.

While the rotary program provides a maximum of flexibility and allows complete adjustment of time to the age of pupils in each group, to the importance of the subject-matter, to the mentality of the pupils, and to the size of the class, yet it has serious defects. In the hands of a skillful teacher the rotary program can be used very effectively. The tendency of human nature, however, is toward the line of least resistance, and the teacher who is not extremely careful will find herself giving a greater amount of time to her best-liked subject or to the most interesting class group and thus bring about a lack of balance in emphasis in the school program. The rotary program should be attempted only with the approval of the county superintendent and with his close personal supervision.

CHAPTER VIII
AGE AND GRADE PLACEMENT OF CHILDREN

IN making the age-grade study of the pupils in the elementary schools of Monroe County considerable difficulty was experienced in securing the birth dates of children, especially in the lower grades. In many cases the teacher had no record of the birth dates of children enrolled in the classes. In other cases the teachers had such records, but the records were not at the schoolroom on the day when the examiners appeared. Where birth dates were not available to the examiners on the day of examination, teachers were asked to send to the county superintendent such birth dates as were lacking. By the time the age-grade charts were made, birth dates had been established for 96.4 per cent of the pupils in the elementary schools. Of the 3,996 children enrolled, only 3,851 are included in the age-grade study.

TABLE XXX. CHRONOLOGICAL AGE-GRADE DISTRIBUTION OF BOYS IN MONROE COUNTY ELEMENTARY SCHOOLS

Chronological age	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Total
4½									
5	5								5
5½	14	1							15
6	41	7							48
6½	76	11	3						90
7	64	45	7						116
7½	38	67	16	2					123
8	23	43	44	7					117
8½	13	40	44	9	1				107
9	6	22	46	30	7				111
9½	4	20	38	54	13	1			130
10	1	6	22	43	33	1		1	107
10½	2	10	25	35	33	17			122
11	1	3	4	31	37	32	13	1	122
11½	2	4	3	18	31	40	7	6	111
12	1		10	9	25	30	31	10	116
12½		1	5	10	16	39	24	13	108
13	1	2	1	4	14	27	31	30	110
13½			3	6	7	18	31	32	97
14			1	3	10	12	20	31	77
14½				2		9	13	22	46
15			1	1	2	5	10	17	36
15½					2		7	11	20
16							1	6	7
16½					2		1		3
17						1		1	2
17½								1	1
18 or over								1	1
TOTAL	292	282	273	264	233	232	189	183	1948

The age of children was calculated as of the date of January 1, 1934. This date was selected because it was the date of the beginning of the second semester. A child was considered 6 years of age until he was 6½, and 6½ years of age until he was 7. The age, 6 years, therefore indicated an age of between 6 and 6½ years. Normal age for the first grade was arbitrarily fixed to include children 6, 6½, and 7 years of age, a span of from 6 years of age to 7½ years, or 1½ years. Normal age for the second grade included children 7, 7½, and 8 years of age, a span of from 7 years of age to 8½ years.

TABLE XXXI. CHRONOLOGICAL AGE-GRADE DISTRIBUTION OF GIRLS IN MONROE COUNTY ELEMENTARY SCHOOLS

Chronological age	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Total
4½									
5	2								2
5½	9	1							10
6	59	6							65
6½	84	12	3						99
7	62	50	8						120
7½	29	76	7	2					114
8	15	55	32	7	1				110
8½	3	33	68	16	3				123
9	1	14	42	34	11	2			104
9½	4	15	28	53	14	4			118
10	1	6	19	47	40	12	1		126
10½		6	14	31	49	25	4		129
11	1	2	4	18	29	40	2	3	99
11½	1	1	4	5	40	44	13	4	112
12			2	2	15	29	41	11	100
12½			3	6	9	33	53	7	111
13				2	7	17	31	29	86
13½		1			8	17	33	47	106
14			1			11	14	33	59
14½					1	2	13	29	45
15				2	1		10	27	40
15½					1	1	4	15	21
16								3	3
17									
17½					1				1
18 or over									
TOTAL	271	278	235	225	230	237	219	208	1903

Overageness and underageness were divided into groups designated as extremely overage or underage and moderately overage or underage. The dividing line between these two groups was arbitrarily set to vary from grade to grade. The span of moderately overageness or underageness covered 1 year in the first and second grades; 1½ years in the third and fourth grades; 2 years in the fifth and sixth grades; and 2½ years in the seventh and eighth grades. For example, children in the first grade 8½ years of age or over were considered extremely overage; from 7½ to 8½ years of age, moderately overage; from 6 to 7½ years of age, normal age; from 5 to 6 years of age, moderately underage; and under 5 years of age, extremely underage. Children in the eighth grade who were 17 years of age or over were considered extremely overage;

TABLE XXXII. CHRONOLOGICAL AGE-GRADE DISTRIBUTION OF BOYS AND GIRLS IN MONROE COUNTY ELEMENTARY SCHOOLS

Chronological age	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Total
4½	7								7
5	23	2							25
5½	100	13							113
6	160	23	6						189
6½	126	95	15						236
7	67	143	23	4					237
7½	38	98	76	14	1				227
8	18	73	112	25	4				230
8½	7	36	68	64	18	2			215
9	8	35	66	107	27	5			248
9½	2	12	41	90	73	13	1	1	233
10	2	16	39	66	82	42	4		251
10½	2	5	8	49	66	72	15	4	221
11	3	5	7	23	71	84	20	10	223
11½	1		12	11	40	59	72	21	216
12		1	8	16	25	72	77	20	219
12½	1	2	1	6	21	44	62	59	196
13		1	3	6	15	35	64	79	203
13½			2	3	10	23	34	64	136
14				2	1	11	26	51	91
14½			1	3	3	5	20	44	76
15					3	1	11	26	41
15½							1	9	10
16					2		1		3
16½					1	1		1	3
17								1	1
17½								1	1
18 or over									
TOTAL	563	560	508	489	463	469	408	391	3851

from 14½ to 17 years of age, moderately overage; from 13 to 14½ years of age, normal age; from 10½ to 13 years of age, moderately underage; and under 10½ years of age, extremely underage.

Tables XXX, XXXI, and XXXII show the age-grade distribution of the boys, girls, and total pupils in Monroe County. The black lines on these tables indicate the limits of the pupils in each grade, who are normal or at age, the dotted lines show the limits of the moderately overage and underage pupils in each grade. At a glance it can be seen that there is little extreme underageness in the county but considerable extreme overageness. Table XXXIII shows a summary of the overageness and underageness by sex and grade and Table XXXIV presents the same data in per cents.

Of the 3,851 pupils included in the study, only 2,108, or 54.7 per cent, are normal; 1,380, or 35.8 per cent, are overage; and 363, or 9.5 per cent, are underage. This distribution of ages is somewhat skewed toward the overage end of the curve. A normal distribution would place about 60 per cent of the pupils in the normal group, about 22 per cent in the overage group, and about 18 per cent in the underage group. (See Table XXXV.) If only the boys are considered, a total of 981 of the 1,948 boys, or 50.4 per cent, are normal; 794, or 40.8 per cent, are overage;

and 173, or 8.8 per cent, are underage. Of the 1,903 girls, 1,127, or 59.2 per cent, are normal; 586, or 30.8 per cent, are overage; and 190, or 10.0 per cent, are underage. A difference in the amount of overageness and underageness between boys and girls is normal and to be expected.

It will be noted in Table XXXIV that the per cent of overageness among boys and also among boys and girls combined is greatest at about the sixth grade. The per cents for boys run as follows: first grade, 31.5; second grade, 38.3; third grade, 41.4; fourth grade, 45.1; fifth grade,

TABLE XXXIII. NUMBER OF PUPILS IN EACH GRADE OVERAGE, AT AGE, AND UNDERAGE IN MONROE COUNTY

Grade	Boys				Girls				Total			
	Overage	At Age	Underage	Total	Overage	At Age	Underage	Total	Overage	At Age	Underage	Total
1	92	181	19	292	55	205	11	271	147	386	30	563
2	108	155	19	282	78	181	19	278	186	336	38	560
3	113	134	26	273	75	142	18	235	188	276	44	508
4	119	127	18	264	66	134	25	225	185	261	43	489
5	109	103	21	233	83	118	29	230	192	221	50	463
6	111	102	19	232	81	113	43	237	192	215	62	469
7	83	86	20	189	74	125	20	219	157	211	40	408
8	59	93	31	183	74	109	25	208	133	202	56	391
Total	794	981	173	1,948	586	1,127	190	1,903	1,380	2,108	363	3,851

TABLE XXXIV. PER CENT OF PUPILS IN EACH GRADE OVERAGE, AT AGE, AND UNDERAGE IN MONROE COUNTY

Grade	Boys			Girls			Total		
	Overage	At Age	Underage	Overage	At Age	Underage	Overage	At Age	Underage
1	31.5	62.0	6.5	20.3	75.6	4.1	26.1	68.6	5.3
2	38.3	55.0	6.7	28.1	65.1	6.8	33.2	60.0	6.8
3	41.4	49.1	9.5	31.9	60.4	7.7	37.0	54.3	8.7
4	45.1	48.1	6.8	29.3	59.6	11.1	37.8	53.4	8.8
5	46.8	44.2	9.0	36.1	51.3	12.6	41.5	47.7	10.8
6	47.8	44.0	8.2	34.2	47.7	18.0	40.9	45.9	13.2
7	43.9	45.5	10.6	33.8	57.1	9.1	38.5	51.7	9.8
8	32.2	50.8	17.0	35.6	52.4	12.0	34.0	51.7	14.3
All Grades	40.8	50.4	8.8	30.8	59.2	10.0	35.8	54.7	9.5

46.8; sixth grade, 47.8; seventh grade, 43.9; and eighth grade, 32.2. The progressive increase in overageness from the first to the sixth grade is to be expected, as is also the falling off or decrease after the sixth grade. The piling up of the effects of retardation clearly accounts for the pro-

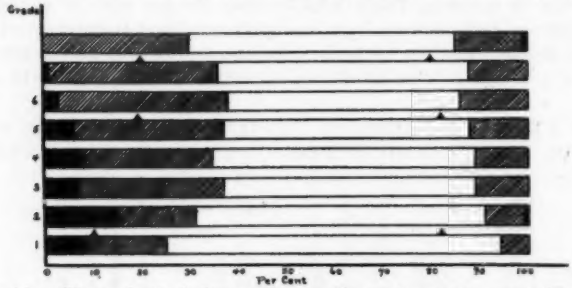


Figure 12. Chronological Overageness, Normal-ageness, and Underageness in Monroe County.*

gressive increases, while elimination from school of pupils reaching the compulsory attendance age limit accounts for the decrease in the per cent of overageness above the sixth grade. The increase to be noticed in the per cent of underage boys from the first to the eighth grades also may be accounted for by the accumulation of underage boys through double promotions and through the elimination of many overage boys in the upper grades. The graphic presentation of the data in Tables XXXIV and XXXV is given in Figure 12.

Standards for the first, fifth, and seventh grades are available. (See footnote to Table XXXV.) Table XXXV shows the per cent of overageness in Monroe County as compared with the standards in the three grades designated. From this table it can be seen that the per cent of overageness in Monroe County in the first grade is 26.1 as compared with a standard of 9.8 per cent. The normal age group in Monroe County in the first grade is 68.6 per cent of the total as compared with a standard of 72.9 per cent. For the county only 5.3 per cent of the pupils in the first grade are underage as compared with a standard of 17.3 per cent. Inspection of the per cents in the fifth and seventh grades shows an almost equal variation, and in the same direction in each case.

Table XXXVI was prepared to discover the degree of variation from normal in the different townships in order to account for the variation from normal by the county as a whole. This table gives the number overage, at age, and underage in each township. Table XXXVII presents the same data in per cents. If the county per cents are taken for a standard, the townships would be ranked as follows in order of the degree of variation, from the least amount of variation to the greatest amount of variation: Bean Blossom, Benton, Bloomington, Perry, Washington, Marion, Clear Creek, Indian Creek, Van Buren, Richland, Salt

* Carats in the figure indicate Standards from Mort, P.R. and Featherstone, W.B. *Entrance and Promotion Standards.* Bureau of Publications, Teachers College, Columbia University, New York, 1932. p. 22.

TABLE XXXV. COMPARISON OF THE PER CENT OF OVERAGENESS, NORMAL-AGENESS, AND UNDERAGENESS IN MONROE COUNTY WITH STANDARD* PER CENTS

Group	Grade 1		Grade 5		Grade 7	
	Monroe County	Standard	Monroe County	Standard	Monroe County	Standard
Boys—						
Overage	31.5	11.3	46.8	25.0	43.9	24.9
At age	62.0	71.9	44.2	61.8	45.5	56.7
Underage	6.5	16.8	9.0	13.2	10.6	18.4
Girls—						
Overage	20.3	8.3	36.1	18.0	33.8	20.1
At age	75.6	73.9	51.3	63.3	57.1	61.2
Underage	4.1	17.8	12.6	18.7	9.1	18.7
Total—						
Overage	26.1	9.8	41.5	21.6	38.5	22.5
At age	68.6	72.9	47.7	62.5	51.7	58.9
Underage	5.3	17.3	10.8	15.9	9.8	18.6

* Standards from Mort, P. R. and Featherstone, W. B. *Entrance and Promotion Standards.* Bureau of Publications, Teachers College, Columbia University, New York, 1932. p. 22.

TABLE XXXVI. NUMBER OF PUPILS IN EACH TOWNSHIP OVERAGE, AT AGE, AND UNDERAGE IN MONROE COUNTY

Township	Boys				Girls				Total			
	Overage	At Age	Underage	Total	Overage	At Age	Underage	Total	Overage	At Age	Underage	Total
Bean Blossom	58	95	9	162	48	94	23	165	106	189	32	327
Benton	48	59	18	125	35	64	15	114	83	123	33	239
Bloomington	103	116	11	230	90	168	13	271	193	284	24	501
Clear Creek	72	131	15	218	49	145	30	224	121	276	45	442
Indian Creek	33	47	22	102	28	36	18	82	61	83	40	184
Marion	6	9	1	16	2	6	0	8	8	15	1	24
Perry	222	184	50	456	142	241	44	427	364	425	94	883
Polk	69	28	3	100	52	47	6	105	121	75	9	205
Richland	54	141	19	214	40	153	15	208	94	294	34	422
Salt Creek	53	29	4	86	41	42	6	89	94	71	10	175
Van Buren	32	104	14	150	34	87	16	137	66	191	30	287
Washington	44	38	7	89	25	44	4	73	69	82	11	162
County	794	981	173	1,948	586	1,127	190	1,903	1,380	2,108	363	3,851

TABLE XXXVII. PER CENT OF PUPILS IN EACH TOWNSHIP OVERAGE, AT AGE, AND UNDERAGE IN MONROE COUNTY

Township	Boys			Girls			Total		
	Over-age	At Age	Under-age	Over-age	At Age	Under-age	Over-age	At Age	Under-age
Bean Blossom	35.8	58.6	5.6	29.1	57.0	13.9	32.4	57.8	9.8
Benton	38.4	47.2	14.4	30.7	56.1	13.2	34.7	51.5	13.8
Bloomington	44.8	50.4	4.8	33.2	62.0	4.8	38.5	56.7	4.8
Clear Creek	33.0	60.1	6.9	21.9	64.7	13.4	27.4	62.4	10.2
Indian Creek	32.4	46.1	21.5	34.1	43.9	22.0	33.2	45.1	21.7
Marion	37.5	56.3	6.2	25.0	75.0	0.0	33.3	62.5	4.2
Perry	48.7	40.4	10.9	33.3	56.4	10.3	41.2	48.1	10.7
Polk	69.0	28.0	3.0	49.5	44.8	5.7	59.0	36.6	4.4
Richland	25.2	65.9	8.9	19.2	73.6	7.2	22.3	69.7	8.0
Salt Creek	61.6	33.7	4.7	46.1	47.2	6.7	53.7	40.6	5.7
Van Buren	21.3	69.3	9.4	24.8	63.5	11.7	23.0	66.6	10.4
Washington	49.4	42.7	7.9	34.2	60.3	5.5	42.6	50.6	6.8
County	40.8	50.4	8.8	30.8	59.2	10.0	35.8	54.7	9.5

TABLE XXXVIII. NUMBER OF BOYS IN MONROE COUNTY WHO ARE OVERAGE, AT AGE, AND UNDERAGE, BY GRADES

Degree of Ageness	Grade								Total
	1	2	3	4	5	6	7	8	
Extremely overage	31	46	28	35	23	15	2	3	183
Moderately overage	61	62	85	84	86	96	81	56	611
Normal	181	155	134	127	103	102	86	93	981
Moderately underage	19	18	26	18	21	19	20	30	171
Extremely underage	0	1	0	0	0	0	0	1	2
All Groups	292	282	273	264	233	232	189	183	1,948

Creek, and Polk. If the per cents of 22 for overage, 60 for normal age, and 18 for underage (adapted from the standards given in Table XXXV) are taken, then the variations change and the townships would be ranked as follows in order of the degree of variation from the least to the greatest: Van Buren, Clear Creek, Richland, Bean Blossom, Benton, Marion, Indian Creek, Bloomington, Perry, Washington, Salt Creek, and Polk. Perhaps this latter list is a better basis for comparison than the former and indicates the relative effort made in each township to prevent too great an amount of overageness.

Tables XXXVIII to XLIII present an analysis of the overageness and underageness in each grade for boys, for girls, and for boys and girls combined. From these tables it can be seen at once that extreme underageness is not a problem in Monroe County. In fact only three cases exist where children are extremely underage. But of the 1,380 overage pupils in the county, 266, or 6.9 per cent of the total number of pupils included in the study, are extremely overage.

Another analysis of the overageness and underageness of the pupils of the county was made on a slightly different basis. The children in each grade were allocated to the grade for which their ages were normal. Table XLIV presents that allocation of the children in each grade. It can be seen that of the 563 pupils in the first grade, 386 were of the proper age to be in the first grade, 30 were too young to be in school, and 323 were older than the normal age for their grade. A total of 231 first grade pupils were at a normal age for the second grade. Two pupils in the first grade were old enough to be in the seventh grade. Three second grade pupils were old enough to be in the eighth grade. Other grades show like extreme variation in ages.

TABLE XXXIX. PER CENT OF BOYS IN MONROE COUNTY WHO ARE OVERAGE, AT AGE, AND UNDERAGE, BY GRADES

Degree of Ageness	Grade								Total
	1	2	3	4	5	6	7	8	
Extremely overage	10.6	16.3	10.3	13.3	9.9	6.5	1.1	1.7	9.4
Moderately overage	20.9	22.0	31.1	31.8	36.9	41.3	42.8	30.6	31.4
Normal	62.0	55.0	49.1	48.1	44.2	44.0	45.5	50.8	50.4
Moderately underage	6.5	6.4	9.5	6.8	9.0	8.2	10.6	16.4	8.7
Extremely underage	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.5	0.1
All Groups	15.0	14.5	14.0	13.6	11.9	11.9	9.7	9.4	100.0

TABLE XL. NUMBER OF GIRLS IN MONROE COUNTY WHO ARE OVERAGE, AT AGE, AND UNDERAGE, BY GRADES

Degree of Ageness	Grade								Total
	1	2	3	4	5	6	7	8	
Extremely overage	11	31	14	12	12	3	0	0	83
Moderately overage	44	47	61	54	71	78	74	74	503
Normal	205	181	142	134	118	113	125	109	1,127
Moderately underage	11	18	18	25	29	43	20	25	189
Extremely underage	0	1	0	0	0	0	0	0	1
All Groups	271	278	235	225	230	237	219	208	1,903

TABLE XLI. PER CENT OF GIRLS IN MONROE COUNTY WHO ARE OVERAGE, AT AGE, AND UNDERAGE, BY GRADES

Degree of Ageness	Grade								Total
	1	2	3	4	5	6	7	8	
Extremely overage	4.1	11.2	6.0	5.3	5.2	1.3	0.0	0.0	4.4
Moderately overage	16.2	16.9	25.9	24.0	30.9	32.9	33.8	35.6	26.4
Normal	75.6	65.1	60.4	59.6	51.3	47.7	57.1	52.4	59.2
Moderately underage	4.1	6.4	7.7	11.1	12.6	18.1	9.1	12.0	9.9
Extremely underage	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.1
All Groups	14.2	14.6	12.4	11.8	12.1	12.5	11.5	10.9	100.0

TABLE XLII. NUMBER OF BOYS AND GIRLS IN MONROE COUNTY WHO ARE OVERAGE, AT AGE, AND UNDERAGE, BY GRADES

Degree of Ageness	Grade								Total
	1	2	3	4	5	6	7	8	
Extremely overage	42	77	42	47	35	18	2	3	266
Moderately overage	105	109	146	138	157	174	155	130	1,114
Normal	386	336	276	261	221	215	211	202	2,108
Moderately underage	30	36	44	43	50	62	40	55	360
Extremely underage	0	2	0	0	0	0	0	1	3
All Groups	563	560	508	489	463	469	408	391	3,851

TABLE XLIII. PER CENT OF BOYS AND GIRLS IN MONROE COUNTY WHO ARE OVERAGE, AT AGE, AND UNDERAGE, BY GRADES

Degree of Ageness	Grade								Total
	1	2	3	4	5	6	7	8	
Extremely overage	7.5	13.8	8.3	9.6	7.6	3.8	0.5	0.8	6.9
Moderately overage	18.6	19.4	28.7	28.2	33.9	37.1	38.0	33.2	28.9
Normal	68.6	60.0	54.3	53.4	47.7	45.9	51.7	51.7	54.7
Moderately underage	5.3	6.4	8.7	8.8	10.8	12.2	9.8	14.0	9.4
Extremely underage	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.3	0.1
All Groups	14.6	14.5	13.2	12.7	12.0	12.2	10.6	10.2	100.0

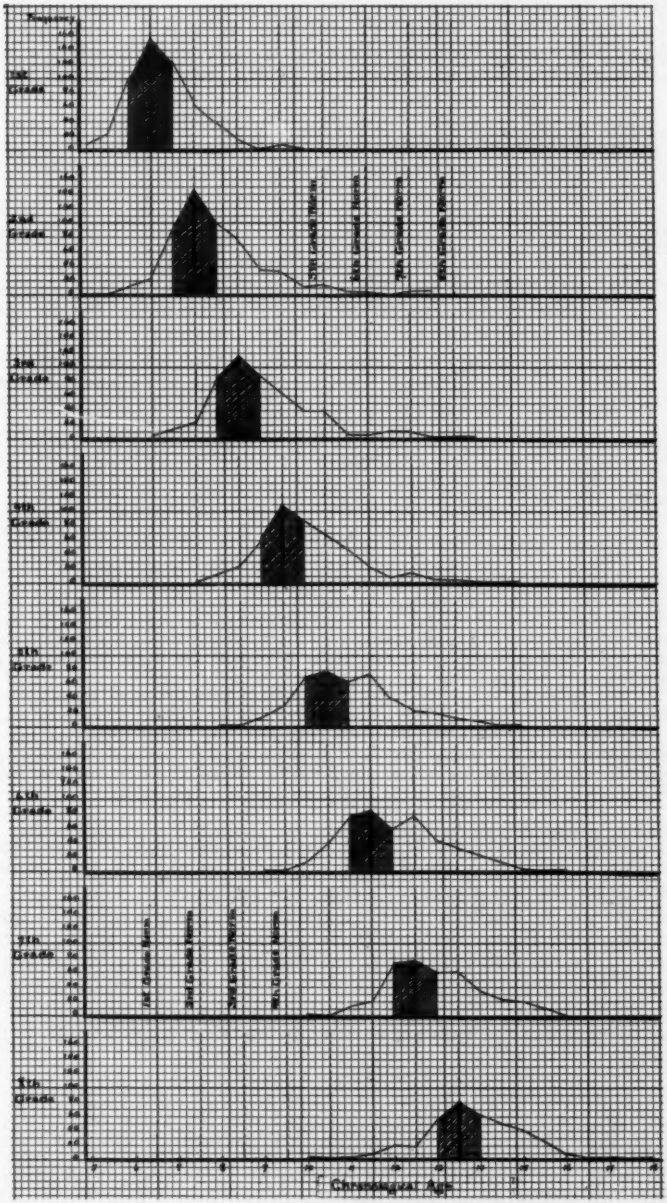


Figure 13. Chronological Age Overlapping in Grades 1 to 8 in the Monroe County Schools.

TABLE XLIV. NUMBER OF PUPILS IN EACH GRADE IN MONROE COUNTY, WHO BY REASON OF THEIR CHRONOLOGICAL AGE, SHOULD BE IN SOME OTHER GRADE *

Grade in Which Pupils Should be Enrolled	Grade in Which Pupils are Enrolled								Total
	1	2	3	4	5	6	7	8	
Below 1st	30	15	.....	.....	.....	.....	.....	.....	45
1	386	131	21	.....	.....	.....	.....	.....	538
2	231	336	114	18	1	.....	.....	.....	700
3	61	207	276	103	23	2	.....	.....	672
4	17	83	195	261	118	20	1	1	696
5	6	33	88	205	221	127	20	5	705
6	6	10	27	83	177	215	107	35	660
7	2	3	21	33	86	175	211	100	631
8	1	3	6	15	46	102	160	202	535
9	.....	.....	3	8	14	39	80	159	303
10	.....	.....	1	3	6	6	32	79	127
11	.....	.....	.....	.....	3	1	2	10	16
12	.....	.....	.....	.....	1	1	.....	3	5
13	.....	.....	.....	.....	.....	.....	.....	1	1
Total Number in Grade	563	560	508	489	463	469	408	391	3,851

* This table may be read as follows: Of the 563 pupils in the first grade 30 had a chronological age too low for the normal age of first grade children, 386 had a chronological age equivalent to the normal age for the first grade, 231 had a chronological age equivalent to the normal age for the second grade, etc.

Or this table may be read as follows: Of the 538 children who by reason of their age should be in the first grade 386 actually are in the first grade, 131 actually are in the second grade, and 21 actually are in the third grade, etc. Since the normal age for each grade covers 3 half years, there is an overlapping of 1 half year between any 2 consecutive grades, hence the sum of the figures in the total line is somewhat larger than the total number of pupils in the elementary schools of the county.

Interpreting the data in Table XLIV in a somewhat different manner, it is found that, of the 538 children in the county who were of normal age for the first grade, 131 were in the second grade, and 21 were in the third grade. Likewise the 535 pupils in the county with ages normal for the eighth grade were distributed among the various grades as follows: 1 in the first grade, 3 in the second, 6 in the third, 15 in the fourth, 46 in the fifth, 102 in the sixth, 160 in the seventh, and 202 in the eighth grade. Figure 13 indicates the degree of overlapping of chronological ages of children enrolled in the elementary schools of the county.

CHAPTER IX

INTELLIGENCE OF MONROE COUNTY SCHOOL CHILDREN

To gain an adequate measure of the efficiency of instruction in any school system it is necessary to discover the children's capacity to learn. The best known guide to use in ascertaining the capacity to learn is the intelligence test. For general survey purposes the group intelligence test is used in preference to the individual intelligence test because of the economy of time involved. The National Intelligence Test was selected for use and given to the children of Grades 3 to 8 inclusive.

Table XLV shows the number and per cent of the children tested in each grade. Of the 2,797 children in the 6 grades tested 2,442, or 87.3 per cent, were present at the time tests were given and were included in this study. The scores made on the tests were transformed into mental ages, and distributions were made of these ages by grades.

The same definitions of normal-ageness, extremely and moderately overageness and underageness given at the beginning of Chapter VIII are used in this chapter with the substitution of mental age for chronological age.

Tables XLVI, XLVII, and XLVIII show the distribution of these mental ages for boys, for girls, and for boys and girls combined. The solid lines on the tables enclose the normal mental ages for each grade. The dotted lines above and below the solid lines are the border lines between those who are extremely overage or underage and those who are moderately overage or underage. It will be noted that the range for those who are moderately overage or underage is increased regularly from 1½ years in the third grade to 2½ years in the eighth grade as described in Chapter VIII. Such procedure is justified from the assumption that a pupil 1½ years overage or underage mentally in the third grade is considerably more of a problem than a child who is 1½ years overage or underage mentally in the eighth grade.

Considerable overlapping of mental ages is evident from the distributions in Table XLVIII. For example, there are 4 pupils in the

TABLE XLV. NUMBER AND PER CENT OF PUPILS IN GRADES 3 TO 8 IN MONROE COUNTY TESTED BY THE NATIONAL INTELLIGENCE TEST

	Grade						Total
	3	4	5	6	7	8	
Number in grade	508	515	489	492	418	375	2,797
Number tested	395	440	432	432	378	365	2,442
Per cent tested	77.7	85.4	88.3	87.8	90.4	97.3	87.3

TABLE XLVI. MENTAL AGE-GRADE DISTRIBUTION OF BOYS IN GRADES 3 TO 8 IN MONROE COUNTY

Mental age	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Total
Under 5½	1						1
5½	1						1
6	2						2
6½	6	1					7
7	16	1		1			18
7½	41	12	5	4			62
8	20	12	1	1			34
8½	43	30	5	4	1		83
9	23	28	12	4	1	2	70
9½	18	30	24	6	3	1	82
10	14	35	19	16	5		89
10½	10	30	36	27	6	6	115
11	7	28	22	28	13	4	102
11½	5	17	28	33	21	15	119
12	2	3	26	24	33	15	103
12½		2	18	20	25	11	76
13		1	7	20	24	16	68
13½		1	4	9	13	18	45
14		2	2	9	16	19	48
14½			3	6	10	9	28
15					7	14	21
15½					5	9	14
16					3	10	13
16½					1	8	9
17						3	3
17½						1	1
18 or over						1	1
TOTAL	209	233	212	212	187	162	1215

TABLE XLVII. MENTAL AGE-GRADE DISTRIBUTION OF GIRLS IN GRADES 3 TO 8 IN MONROE COUNTY

Mental age	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Total
Under 5½							
5½							
6							
6½	2						2
7	5						5
7½	29	2		1			32
8	12	8	2				22
8½	30	16	6	2	2		56
9	30	20	8	2		1	61
9½	25	26	12	7	2		72
10	16	26	19	12	2	1	76
10½	21	35	30	20	6	2	114
11	11	33	33	27	11	6	121
11½	2	23	37	41	18	10	131
12	2	9	23	37	30	17	118
12½		1	18	26	17	19	81
13		2	15	22	25	23	87
13½		2	7	7	19	15	50
14			6	11	16	27	60
14½				2	18	22	42
15				4	15	18	37
15½			1		6	12	19
16					3	9	12
16½					1	6	7
17						1	1
17½				1		1	2
18 or over							
TOTAL	185	203	217	222	191	190	1208

TABLE XLVIII. MENTAL AGE-GRADE DISTRIBUTION OF BOYS AND GIRLS IN GRADES 3 TO 8 IN MONROE COUNTY

Mental age	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Total
Under 5½	1						1
5½	1						1
6	2						2
6½	6	1					9
7	21	1		1			23
7½	70	14	5	5			94
8	32	20	3	1			56
8½	73	46	11	6	3		139
9	53	48	20	6	1	3	131
9½	43	56	36	13	5	1	154
10	30	61	38	28	7	1	165
10½	31	65	66	47	12	8	229
11	18	61	55	55	24	10	223
11½	7	40	65	74	39	25	250
12	4	12	49	61	63	32	221
12½		3	36	46	42	30	157
13		3	22	42	49	39	155
13½		3	11	16	32	33	95
14		2	8	20	32	46	108
14½			3	8	28	31	70
15				4	22	32	58
15½			1		11	21	33
16					6	19	25
16½					2	14	16
17						4	4
17½				1		2	3
18 or over						1	1
TOTAL	394	436	429	434	378	352	2423

third grade with a mental age of 12 years, a mental age considered normal for the sixth and seventh grades. On the other hand there are 3 pupils in the eighth grade with a mental age of 9 years, a mental age considered normal for the third and fourth grades. Figure 14 shows the overlapping of mental ages by grades.

Tables XLIX to LIV present summaries of Tables XLVI, XLVII, and XLVIII. From these tables it is seen that 6.0 per cent of the boys

TABLE XLIX. NUMBER OF BOYS IN GRADES 3 TO 8 IN MONROE COUNTY WHO ARE MENTALLY OVERAGE, NORMAL, AND UNDERAGE

Degree of Ageness	Grade 3	4	5	6	7	8	Total
Extremely overage	14	9	9	6	4	5	47
Moderately overage	42	75	79	58	51	50	355
Normal	86	93	77	85	82	53	476
Moderately underage	63	54	42	53	48	51	311
Extremely underage	4	2	5	10	2	3	26
All Groups	209	233	212	212	187	162	1,215

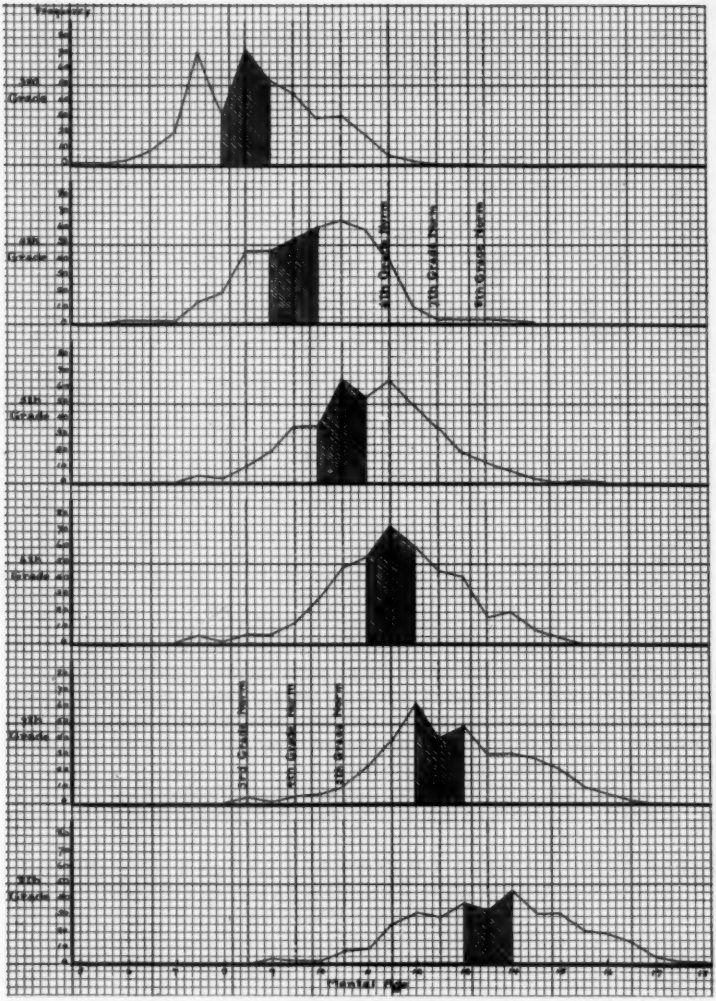


Figure 14. Mental Age Overlapping in Grades 3 to 8 in the Monroe County Schools.

and 5.2 per cent of the girls, or 5.6 per cent of the pupils tested, are extremely overage or underage. This group of 136 pupils who are extremely ill-adjusted so far as mental age is concerned is discussed in a separate section of this report. The per cent of girls who are moderately overage mentally is greater than the per cent of boys who are moderately

TABLE L. PER CENT OF BOYS IN GRADES 3 TO 8 IN MONROE COUNTY WHO ARE MENTALLY OVERAGE, NORMAL, AND UNDERAGE

Degree of Ageness	Grade						Total
	3	4	5	6	7	8	
Extremely overage	6.7	3.9	4.2	2.8	2.1	3.1	3.9
Moderately overage	20.1	32.2	37.3	27.4	27.3	30.9	29.2
Normal	41.1	39.9	36.3	40.1	43.8	32.7	39.2
Moderately underage	30.1	23.1	19.8	25.0	25.7	31.5	25.6
Extremely underage	2.0	.9	2.4	4.7	1.1	1.8	2.1
All Groups	17.2	19.2	17.4	17.4	15.4	13.4	100.0

TABLE LI. NUMBER OF GIRLS IN GRADES 3 TO 8 IN MONROE COUNTY WHO ARE MENTALLY OVERAGE, NORMAL, AND UNDERAGE

Degree of Ageness	Grade						Total
	3	4	5	6	7	8	
Extremely overage	15	14	14	7	4	2	56
Moderately overage	62	91	93	66	74	67	453
Normal	72	72	82	105	72	65	468
Moderately underage	36	26	28	41	39	54	224
Extremely underage	0	0	0	3	2	2	7
All Groups	185	203	217	222	191	190	1,208

TABLE LII. PER CENT OF GIRLS IN GRADES 3 TO 8 IN MONROE COUNTY WHO ARE MENTALLY OVERAGE, NORMAL, AND UNDERAGE

Degree of Ageness	Grade						Total
	3	4	5	6	7	8	
Extremely overage	8.1	6.9	6.4	3.1	2.1	1.0	4.6
Moderately overage	33.5	44.8	42.9	29.7	38.7	35.3	37.5
Normal	38.9	35.5	37.8	47.3	37.7	34.2	38.7
Moderately underage	19.5	12.8	12.9	18.5	20.4	28.5	18.6
Extremely underage	0.0	0.0	0.0	1.4	1.1	1.0	.6
All Groups	15.3	16.8	18.0	18.4	15.8	15.7	100.0

TABLE LIII. NUMBER OF BOYS AND GIRLS IN GRADES 3 TO 8 IN MONROE COUNTY WHO ARE MENTALLY OVERAGE, NORMAL, AND UNDERAGE

Degree of Ageness	Grade						Total
	3	4	5	6	7	8	
Extremely overage	29	23	23	13	8	7	103
Moderately overage	104	166	172	124	125	117	808
Normal	158	165	159	190	154	118	944
Moderately underage	99	80	70	94	87	105	535
Extremely underage	4	2	5	13	4	5	33
All Groups	394	436	429	434	378	352	2,423

TABLE LIV. PER CENT OF BOYS AND GIRLS IN GRADES 3 TO 8 IN MONROE COUNTY WHO ARE MENTALLY OVERAGE, NORMAL, AND UNDERAGE

Degree of Ageness	Grade						Total
	3	4	5	6	7	8	
Extremely overage	7.4	5.3	5.4	3.0	2.1	2.0	4.2
Moderately overage	26.4	38.1	40.0	28.6	33.1	33.2	33.3
Normal	40.1	37.8	37.1	43.8	40.7	33.5	39.0
Moderately underage	25.1	18.3	16.3	21.6	23.0	29.8	22.1
Extremely underage	1.0	.5	1.2	3.0	1.1	1.5	1.4
All Groups	16.3	18.0	17.7	17.9	15.6	14.5	100.0

overage, 37.5 per cent as compared with 29.2 per cent. Conversely, the per cent of boys who are moderately underage is greater than the per cent of girls who are moderately underage, 25.6 per cent as compared with 18.6 per cent.

On the whole there is a considerably greater number of pupils who are moderately overage than moderately underage, 33.3 per cent as compared with 22.1 per cent.

Figure 15 presents the picture of the per cent distribution of Table LIV. From the standpoint of mental age, there does not seem to be as great an adjustment of mental age to grade as there should be.

When the mental ages of the pupils are considered in relation to their chronological ages (that is, mental age divided by chronological age, which gives the intelligence quotient), a slightly different picture of the situation is discovered. Table LV shows the distribution of intelligence quotients for the county by grades, and Table LVI shows the same distribution in per cents.

In these tables the extremely above normal group was arbitrarily fixed to include those children having intelligence quotients of above 130; the moderately above normal, from 111 to 130; the normal, from 91 to 110; the moderately below normal, from 71 to 90; and the extremely below normal, below 71.

When the entire group of 2,442 children is considered, the distribution is normal. Some little variation from normal exists in individual grades. The per cent of extremely abnormal cases is greatest in the third grade and decreases with each advanced grade through the seventh

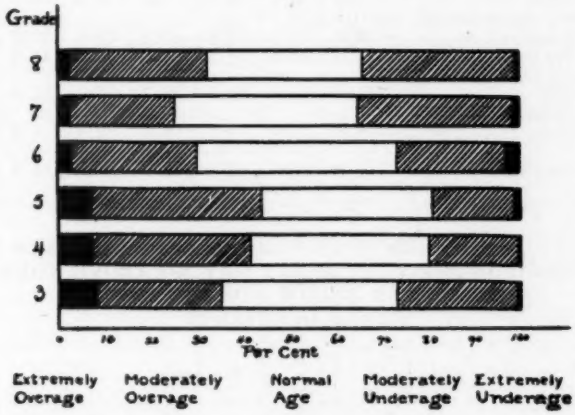


Figure 15. Mental Overageness, Normal-ageness, and Underageness in Grades 3 to 8 in Monroe County Schools.

TABLE LV. NUMBER OF PUPILS IN GRADES 3 TO 8 IN MONROE COUNTY HAVING ABOVE NORMAL, NORMAL, AND BELOW NORMAL INTELLIGENCE QUOTIENTS

Group	Grade						Total
	3	4	5	6	7	8	
Extremely above normal (Over 130)	35	26	24	15	12	13	125
Moderately above normal (111 to 130)	82	108	120	87	93	84	574
Normal (91 to 110)	148	184	178	191	171	162	1,034
Moderately below normal (71 to 90)	96	96	90	122	93	87	584
Extremely below normal (Below 71)	34	26	20	17	9	19	125
All Groups	395	440	432	432	378	365	2,442

TABLE LVI. PER CENT OF PUPILS IN GRADES 3 TO 8 IN MONROE COUNTY HAVING ABOVE NORMAL, NORMAL, AND BELOW NORMAL INTELLIGENCE QUOTIENTS

Group	Grade						Total
	3	4	5	6	7	8	
Extremely above normal (Over 130)	8.8	5.9	5.6	3.5	3.2	3.6	5.1
Moderately above normal (111 to 130)	20.8	24.6	27.8	20.1	24.6	23.0	23.5
Normal (91 to 110)	37.5	41.8	41.2	44.2	45.2	44.4	42.4
Moderately below normal (71 to 90)	24.3	21.8	20.8	28.3	24.6	23.8	23.9
Extremely below normal (Below 71)	8.6	5.9	4.6	3.9	2.4	5.2	5.1
All Groups	16.2	18.0	17.7	17.7	15.5	14.9	100.0

TABLE LVII. NUMBER OF PUPILS IN GRADES 3 TO 8 IN EACH TOWNSHIP IN MONROE COUNTY HAVING ABOVE NORMAL, NORMAL, AND BELOW NORMAL INTELLIGENCE QUOTIENTS

Group	Township												Total
	Bean Blossom	Benton	Bloomington	Clear Creek	Indian Creek	Marion	Perry	Polk	Richland	Salt Creek	Van Buren	Washington	
Extremely above	8	5	12	13	11	0	44	0	14	1	15	2	125
Moderately above	42	38	85	71	24	5	145	6	78	15	43	22	574
Normal	97	74	154	112	43	6	215	33	115	45	94	46	1,034
Moderately below	61	41	73	46	38	2	123	48	52	36	37	27	584
Extremely below	10	11	11	14	1	1	28	18	4	13	6	8	125
All Groups	218	169	335	256	117	14	555	105	263	110	195	105	2,442

grade. A slight increase in the per cent of abnormal cases in the eighth grade over the seventh grade is evident.

It is striking that 5.1 per cent of the children in the upper 6 grades in the county are extremely above normal in intelligence, and also that an equal per cent are extremely below normal. One must not be misled, however, by the data presented in Tables LV and LVI. It is quite likely that, if the children in the first 2 grades had been measured, a much greater per cent of extremely below normal cases would have been found.

Data presented in the section on retardation and acceleration show a "piling up" of below normal cases in the early grades.

Tables LVII and LVIII show the distribution of intelligence quotients by townships. Two townships, Polk and Salt Creek, have a comparatively large per cent of extremely below normal cases. Only 6 pupils in Grades 3 to 8 in Polk Township, out of a total of 105 pupils in those grades, are above normal in intelligence. Approximately one-fourth of the cases of extremely low intelligence in the county are found in the 2 townships mentioned, although less than one-tenth of the children of the county are in school in those townships. A corresponding lack of children with extremely high intelligence quotients is found in Polk and Salt Creek townships and also in Marion and Washington townships. Only 3 children of the 334 in these 4 townships have intelligence quotients of over 130.

TABLE LVIII. PER CENT OF PUPILS IN GRADES 3 TO 8 IN EACH TOWNSHIP IN MONROE COUNTY HAVING ABOVE NORMAL, NORMAL, AND BELOW NORMAL INTELLIGENCE QUOTIENTS

Group	Township												Total
	Bean Blossom	Benton	Bloomington	Clear Creek	Indian Creek	Marion	Perry	Polk	Richland	Salt Creek	Van Buren	Washington	
Extremely above	4	3	4	5	9	0	8	0	5	1	8	2	5.1
Moderately above	19	23	25	28	21	36	26	6	30	13	22	21	23.5
Normal	44	44	46	44	37	43	39	31	44	41	48	44	42.4
Moderately below	28	24	22	18	32	14	22	46	20	33	19	26	23.9
Extremely below	5	6	3	5	1	7	5	17	1	12	3	7	5.1
All Groups	8.9	6.9	13.7	10.5	4.8	.6	22.7	4.3	10.8	4.5	8.0	4.3	100.0

In all townships except 3 the normal group contains between 40 and 48 per cent of the children. Indian Creek and Polk townships show a markedly smaller per cent of normal children and a correspondingly greater per cent of moderately below normal children than are found in the county as a whole. Perry Township, on the other hand, shows a slightly smaller per cent of normal children but a greater per cent of moderately above normal children than does the county as a whole.

CHAPTER X

PROGRESS THROUGH THE GRADES*

ONE of the measures of the efficiency of instruction as well as of pupil-teacher adjustment is the degree of overageness and underageness expressed in terms of failures and double promotions. Blanks were sent

TABLE LIX. NUMBER OF PUPILS WHO WERE DOUBLE-PROMOTED, WHO MADE NORMAL PROGRESS, AND WHO FAILED IN THE ELEMENTARY GRADES IN MONROE COUNTY

Grade	Total Pupils*	Double-Promoted		Normal	Failed					
		2 Years	1 Year		1 Year	2 Years	3 Years	4 Years	5 Years	6 Years
1.....	578	0	0	438	116	16	5	2	0	1
2.....	475	0	0	318	128	23	3	2	1	0
3.....	541	0	9	348	115	52	13	3	1	0
4.....	482	1	20	278	119	48	10	7	0	0
5.....	438	1	24	272	92	39	9	2	1	0
6.....	431	2	31	261	104	32	6	0	0	0
7.....	442	5	52	241	130	14	4	2	0	0
8.....	341	5	29	225	72	12	0	0	0	0
Total...	3,728	14	165	2,381	876	236	50	18	3	1

* The sum of the figures on the line following the total does not always equal the total number of pupils in the grade. For example: in the fourth grade, the total number of pupils is 482, while the sum of the figures following "482" is 483. The reason for the apparent inconsistency is that 1 pupil now enrolled in the fourth grade completed the first and second grades in his first year of school and repeated the third grade. Therefore, this pupil is included in the 20 pupils who were double-promoted 1 year and also in the 119 pupils who failed 1 year. His progress through the grades is indicated in the following manner: 1 and 2, 3, 3, 4. Pupils included more than once in other grades are as follows:

Fifth grade: one pupil, 1, 2 and 3, 4, 5, 5; one pupil, 1, 2, 3 and 4, 5, 5.

Sixth grade: one pupil, 1, 1, 2 and 3, 4, 5, 6; one pupil 1 and 2, 3, 3, 4 and 5, 6; one pupil, 1, 1, 2 and 3, 4, 5, 6, 6, 6; one pupil, 1, 2, 3 and 4, 5, 5, 6; one pupil, 1, 1, 2, 3 and 4, 5, 6.

Seventh grade: one pupil, 1 and 2, 3, 4, 4, 4, 5, 5, 6, 7; one pupil, 1, 1, 2 and 3, 4, 5, 6, 7; one pupil, 1, 1, 2 and 3, 4, 4, 5, 5, 6, 7; one pupil 1 and 2, 3, 3, 4, 5, 6, 7; one pupil, 1, 1, 2, 3, 4 and 5, 6, 7; one pupil, 1 and 2, 3, 4, 5, 6, 7, 7.

Eighth grade: one pupil, 1 and 2, 3, 4, 4, 5, 6, 7, 8; one pupil, 1, 2, 3, 3, 4 and 5, 6, 7, 8.

This table is read as follows: Of the 578 pupils in the first grade, 438 were enrolled for the first time, 116 failed once and were enrolled for the second time, 16 failed twice and were enrolled for the third time, 5 failed 3 times and were enrolled for the fourth time, etc.

* The data for this chapter were collected and summarized by Mr. Clarence Leuck, Superintendent of Monroe County Schools.

to each teacher during the winter of 1934-35 to secure a record of the progress of each pupil through the elementary school. This chapter presents discussions of the analyses of data collected on the progress blanks.

The first study of the data revealed the number of pupils enrolled in school who failed, the number of times failure occurred, and the point at which pupils failed. Table LIX shows the summary of data for all 8 grades in the county. From this table it can be seen that of the 3,728 pupils included in the study of this chapter, 2,381, or 63.8 per cent, neither failed nor were double-promoted throughout their school life; 179, or less than 5 per cent, were double-promoted; and 1,184, or about 32 per cent, failed one or more times. Table LX shows the per cent of the pupils in each grade who were double-promoted, who made normal progress, and who failed. The per cent of pupils who failed one or more times reaches its peak in the fourth grade when 38.2 per cent failed one or more times. A greater per cent of the pupils were double-promoted in the seventh grade than in any other grade, but in that grade the per cent of pupils having normal progress was least.

Analysis of the point at which failure occurred shows that of the 128 second grade pupils who failed once, 91 failed once in the first grade and 37 once in the second grade. Seventy other pupils failed once each in the first and second grades. One pupil failed in the first grade 4 times and in the second grade once. Of the 115 third grade pupils who failed once, 62 failed in the first grade, 30 failed in the second grade, and 23 failed in the third grade. A total of 26 other pupils failed once each in the first and second grades. One third grade pupil failed 4 times in the first grade and once in the third grade.

Of the 119 pupils who failed once in the fourth grade, 32 failed in the first grade, 34 in the second, 35 in the third, and 17 in the fourth.

TABLE LX. PER CENT OF PUPILS ENROLLED IN EACH GRADE IN MONROE COUNTY WHO WERE DOUBLE-PROMOTED, WHO MADE NORMAL PROGRESS, AND WHO FAILED *

Grade	Per Cent Double-Promoted	Per Cent Normal	Per Cent Failed
1	.0	75.8	24.2
2	.0	67.0	33.0
3	1.7	62.5	35.8
4	4.3	57.7	38.2
5	5.7	62.1	32.6
6	7.6	60.6	33.0
7	12.2	56.8	34.0
8	10.0	66.0	24.6
Total	4.8	63.8	31.7

* The totals of the per cents in Grades 4, 5, 6, 7, and 8 do not equal 100 because in each grade 1 or more pupils both failed and were double promoted and therefore are included in two columns.

TABLE LXI. DISTRIBUTION OF FAILURES BY GRADES IN MONROE COUNTY *

Grade	Number of Failures	Number Who Failed in Each Grade							
		1	2	3	4	5	6	7	8
1	140	140	.....	.....	.....	.....	.....	.....	.....
2	157	119	60	.....	.....	.....	.....	.....	.....
3	184	118	81	52	.....	.....	.....	.....	.....
4	184	62	68	75	49	.....	.....	.....	.....
5	143	58	39	44	32	25	.....	.....	.....
6	142	42	33	38	19	28	20	.....	.....
7	150	37	31	33	23	16	16	18	.....
8	84	17	15	15	15	13	7	9	5
Total	1,184	593	327	257	138	82	43	27	5

* This table is read as follows: 140 pupils failed in the first grade; of the 157 pupils in the second grade who failed, 119 failed at least once in the first grade and 60 failed at least once in the second grade; etc.

Of the 92 pupils in the fifth grade who failed once, 33 failed in the first grade, 17 in the second, 21 in the third, 12 in the fourth, and 7 in the fifth. In the sixth grade 104 pupils failed only once, 30 of whom failed in the first grade, 18 in the second, 21 in the third, 11 in the fourth, 15 in the fifth, and 9 in the sixth.

A total of 130 pupils in the seventh grade failed once, 30 of whom failed in the first grade, 26 in the second, 26 in the third, 17 in the fourth, 9 in the fifth, 10 in the sixth, and 12 in the seventh. In the eighth grade 72 pupils failed only once, 14 of whom failed in the first grade, 11 in the second, 14 in the third, 11 in the fourth, 12 in the fifth, 4 in the sixth, 3 in the seventh, and 3 in the eighth.

Table LXI shows a slightly different picture of the distribution of failures by grades, and emphasizes the finding that the chances of failure decrease as a pupil progresses through the grades.

A total of 179 pupils were double-promoted. Of this number 14 were double-promoted twice, 3 completed the first 3 grades in 1 year; 2 completed the first 4 grades in 2 years; 1 completed the second, third, fourth, and fifth grades in 2 years; 1 completed the third, fourth, fifth, and sixth grades in 2 years; 4 completed the first and second and the fourth and fifth grades in 1 year each; 1 completed the first and second and the fifth and sixth in 1 year each; and 2 completed the second and third and the fifth and sixth in 1 year each. Of the 165 pupils who were double-promoted once, 68 received the double promotion in the first grade, 43 in the second, 22 in the third, 23 in the fourth, 8 in the fifth, and 1 in the sixth.

With normal progress the 3,728 pupils enrolled in the 8 grades and included in this study should have spent a total of 15,677 years in school. They actually spent 17,075 years, 8.9 per cent longer than normal. Table LXII shows the distribution by grades. The regular decrease in the per

cent greater than normal from the first to the eighth grade is a reflection of the concentration of failures in the lower grades and the elimination of failing students from school in the upper grades.

TABLE LXII. PER CENT OF BELOW-NORMALNESS BY GRADE IN MONROE COUNTY *

Grades	Years Required for Normal Progress	Years Actually Spent	Per Cent That Time Actually Spent is Above Normal
1	578	755	30.6
2	950	1,146	20.6
3	1,623	1,889	16.4
4	1,928	2,179	13.0
5	2,190	2,374	8.4
6	2,586	2,737	5.8
7	3,094	3,210	3.8
8	2,728	2,785	2.1
Total	15,677	17,075	8.9

* This table is read as follows: There were 578 pupils enrolled in the first grade, but these 578 pupils spent a total of 755 years in school, a time 30.6 per cent longer than normal. The 475 pupils enrolled in the second grade would have spent 950 years in school had they made normal progress, whereas actually they were found to have spent 1,146 years in school, an amount of time 20.6 per cent greater than normal, etc.

TABLE LXIII. PER CENT OF PUPILS WHO WERE DOUBLE-PROMOTED, WHO MADE NORMAL PROGRESS, AND WHO FAILED IN GRADES 1 TO 4 IN MONROE COUNTY DURING THE LAST 5 YEARS

Year	Per Cent Double-Promoted	Per Cent Normal	Per Cent Failed
1933-34	.1	85.5	14.4
1932-33	1.9	82.1	16.0
1931-32	3.5	82.3	14.2
1930-31	5.1	85.8	9.1
1929-30	2.6	87.5	9.9

Comparison of the extent of acceleration and retardation in the first 4 grades over a period of 5 years is provided by the data presented in Table LXIII. A marked decrease in the per cent of pupils double-promoted is evident during the last 4 years. There is no corresponding decrease in the per cent of pupils who failed during the last 3 years. It would seem from the data presented, that after a preliminary readjustment of pupils and a consequent reclassification into proper grades, a determined effort should be made to reduce materially the per cent of pupils failing throughout the school system.

CHAPTER XI
ACHIEVEMENT IN GRADES 1, 2, AND 3

THE testing program for Grades 1, 2, and 3 consisted of the Haggerty Reading Examination, Sigma 1. According to Table LXIV, 79.0 per cent, or 1,349 of the 1,707 children enrolled in these three grades, were present at the time tests were given and are included in this study. Of the 614 pupils enrolled in the first grade 453, or 73.8 per cent, were tested. In the second grade 81.4 per cent, or 476, of the 585 enrolled in the grade were tested. Of the 508 pupils enrolled in the third grade, 420 or 82.7 per cent were tested.

TABLE LXIV. NUMBER AND PER CENT OF PUPILS IN GRADES 1 TO 3 IN MONROE COUNTY TESTED BY THE HAGGERTY READING EXAMINATION, SIGMA 1

	Grade 1	Grade 2	Grade 3	Total
Number in grade	614	585	508	1,707
Number tested	453	476	420	1,349
Per cent tested	73.8	81.4	82.7	79.0

The tests were given and scored, and the scores were converted into educational ages on the basis of standards presented by the manual accompanying the test.[1] The results of the tabulation of educational ages for the county as a whole in each of the three grades are presented in Table LXV. Analysis of these results are presented in Table LXVI and Figure 16.

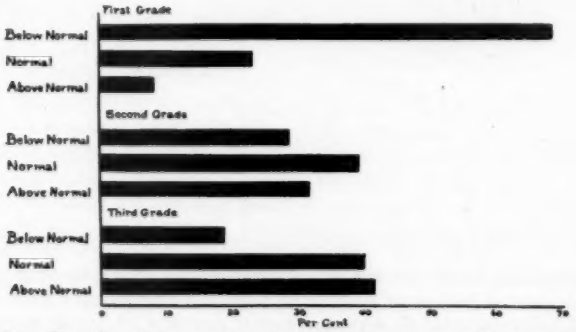


Figure 16. Reading Overageness, Normal-ageness, and Underageness in Grades 1 to 3 in Monroe County as Indicated by the Haggerty Reading Examination, Sigma 1.

[1] Haggerty Reading Examination, Sigma 1, *Manual of Directions*, p. 9.

Normal for the first grade was arbitrarily fixed to include educational ages of 6, 6½, and 7 years. All ages 7½ years or above were considered above normal; all ages below 6 years were considered below normal.

Ages 7, 7½, and 8 years were considered normal for the second grade. All ages 8½ years or above were considered above normal; all

TABLE LXV. DISTRIBUTION OF THE READING AGES OF PUPILS IN GRADES 1 TO 3 IN MONROE COUNTY AS INDICATED BY THE HAGGERTY READING EXAMINATION, SIGMA 1*

Reading Age in Years	Number of Pupils		
	Grade 1	Grade 2	Grade 3
Below 6	312	85	10
6	36	30	5
6½	29	22	6
7	39	74	27
7½	14	66	31
8	12	47	36
8½	6	74	87
9	0	27	46
9½	3	29	72
10	0	15	52
10½	2	6	38
11 or over	0	1	10
Total	453	476	420

* This table is read as follows: Of the 453 pupils in the first grade who were examined by the Haggerty Reading Examination, 312 pupils made a score equivalent to a reading age of below 6 years, 36 pupils made a score equivalent to a reading age of 6 years, 29 pupils made a score equivalent to a reading age of 6½ years, etc.

TABLE LXVI. NUMBER AND PER CENT OF MONROE COUNTY PUPILS IN GRADES 1 TO 3 WHO ARE ABOVE NORMAL, NORMAL, AND BELOW NORMAL IN READING, AS INDICATED BY THE HAGGERTY READING EXAMINATION, SIGMA 1

Group	Grade 1		Grade 2		Grade 3	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
Below normal	312	68.9	137	28.7	79	18.6
Normal	104	23.0	187	39.4	169	40.3
Above normal	37	8.1	152	31.9	172	41.1
Total	453	100.0	476	100.0	420	100.0

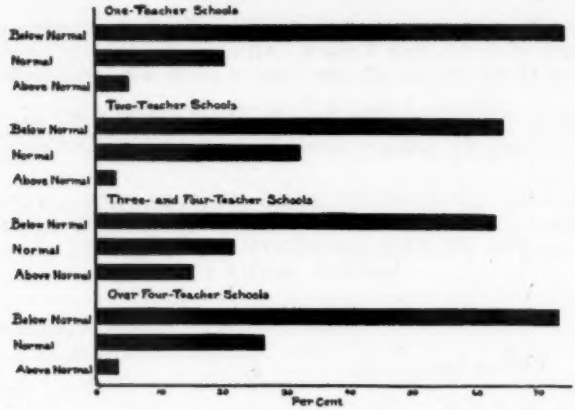


Figure 17. Reading Overageness, Normal-ageness, and Underageness in Grade 1 in Each Type of School in Monroe County as Indicated by the Haggerty Reading Examination, Sigma 1.

ages below 7 years were considered below normal. Ages 8, 8½, and 9 years were considered normal for the third grade. All ages 9½ years or above were considered above normal; all ages below 8 years were considered below normal. These normal age limits correspond with those given in Chapter VIII with educational age substituted for chronological age.

The extremely large per cent of pupils below normal in reading ability in the first grade requires some explanation. Discovery of the causes leading to such low ability is difficult. Some might attribute the low achievement to the prevalence of one-teacher schools; others might attribute it to the inexperience of teachers in rural schools; others might feel that there were many pupils in the first grade too young to be in school; and still others might claim that not sufficient time had been spent in reading in the lower grades. Each of these claims has been investigated, together with the possibility that some one or more townships with extremely low achievement might cause the low average for the entire county.

The distributions of educational ages classified by the type of school which the children were attending were condensed according to age limits already given to above normal, normal, and below normal groups in Table LXVII, and presented in graph form in Figures 17, 18, and 19. In the 43 one-teacher schools, 74.3 per cent of the first grade children were below normal; in the 6 two-teacher schools, 64.7 per cent were below normal; in the 10 three- and four-teacher schools, 63.1 per cent were below normal; and in the 3 schools having more than 4 teachers, 70.3 per cent were below normal. The variation from the county figure of 68.9 per cent in each case is not great enough to be of any significance. There is, however, a slight indication that by the time the third grade is reached a somewhat greater per cent of the children are normal or above normal in reading achievement. (Figure 16.)

The same procedure as just explained was used to make an analysis of the influence of the experience of the teachers of the first and second grades on the reading achievement of the children in those grades. Tables LXVIII and LXIX show the results of this analysis. Again there is not sufficient variation in each case to be of significance, as is indicated by Figure 20, although, if there is any advantage to be claimed, the teachers with from 11 to 20 years experience would receive the benefit.

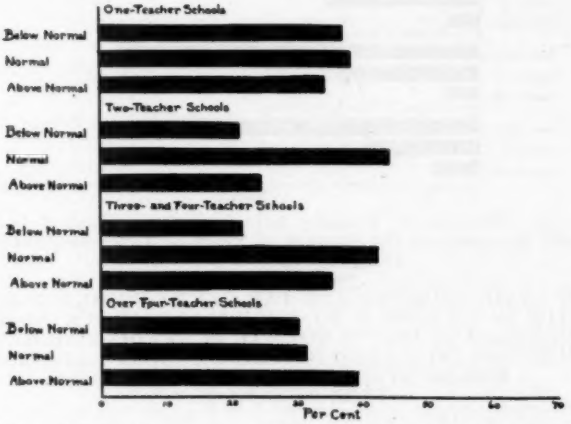


Figure 18. Reading Overageness, Normal-ageness, and Underageness in Grade 2 in Each Type of School in Monroe County as Indicated by the Haggerty Reading Examination, Sigma 1.

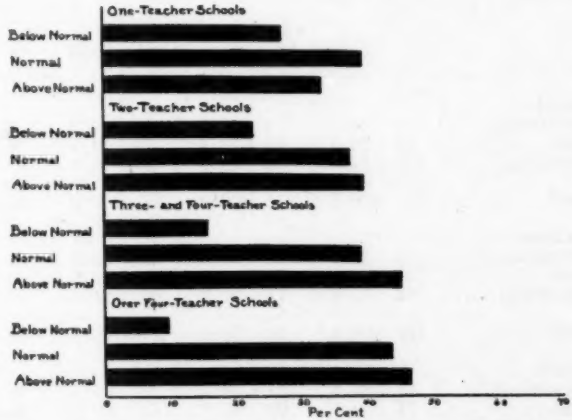


Figure 19. Reading Overageness, Normal-ageness, and Underageness in Grade 3 in Each Type of School in Monroe County as Indicated by the Haggerty Reading Examination, Sigma 1.

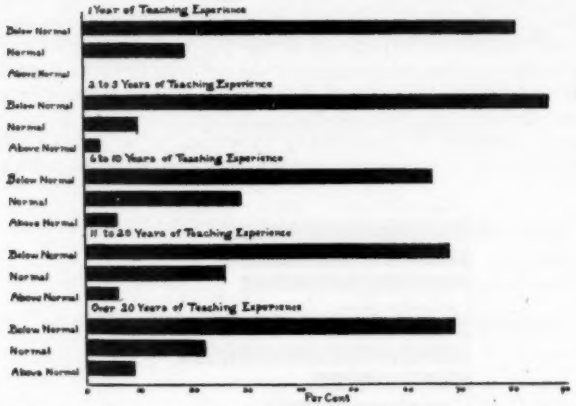


Figure 20. Analysis of Reading Achievement in Grade 1 in Monroe County according to the Number of Years of Teaching Experience of First Grade Teachers.

TABLE LXVII. NUMBER AND PER CENT OF MONROE COUNTY PUPILS IN GRADES 1 TO 3 WHO ARE ABOVE NORMAL, NORMAL, AND BELOW NORMAL IN READING ACHIEVEMENT AS INDICATED BY THE HAGGERTY READING EXAMINATION, SIGMA 1, ANALYZED BY TYPE OF SCHOOL *

Group	One-Teacher Schools (43 Schools)		Two-Teacher Schools (6 Schools)		Three- and Four-Teacher Schools (10 Schools)		Over Four-Teacher Schools (6 Schools)	
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
First Grade—								
Above normal	9	5.2	1	3.0	24	15.2	3	3.3
Normal	35	20.5	11	32.3	34	21.7	24	26.4
Below normal	127	74.3	22	64.7	99	63.1	64	70.3
Total	171	100.0	34	100.0	157	100.0	91	100.0
Second Grade—								
Above normal	40	24.1	18	34.6	60	35.5	34	38.2
Normal	64	38.6	23	44.2	72	42.6	28	31.5
Below normal	62	37.3	11	21.2	37	21.9	27	30.3
Total	166	100.0	52	100.0	169	100.0	89	100.0
Third Grade—								
Above normal	45	33.1	21	39.7	58	45.3	48	46.6
Normal	54	39.7	20	37.7	50	39.1	45	43.7
Below normal	37	27.2	12	22.6	20	15.6	10	9.7
Total	136	100.0	53	100.0	128	100.0	103	100.0

* This table is read as follows: In the 43 one-teacher schools of Monroe County, of 171 first grade pupils examined, 9 or 5.2 per cent were above normal, 35 or 20.5 per cent were normal, and 127 or 74.3 per cent were below normal. Of 34 first grade pupils examined in the 6 two-teacher schools, 1 or 2.9 per cent were above normal, etc.

TABLE LXVIII. NUMBER AND PER CENT OF MONROE COUNTY PUPILS IN GRADE 1 WHO ARE ABOVE NORMAL, NORMAL, AND BELOW NORMAL IN READING ACHIEVEMENT AS INDICATED BY THE HAGGERTY READING EXAMINATION, SIGMA 1, ANALYZED ON THE BASIS OF THE NUMBER OF YEARS OF TEACHING EXPERIENCE OF FIRST GRADE TEACHERS

Group	Teaching Experience										Total	
	1 Year (6 Teachers)		2 to 5 Years (13 Teachers)		6 to 10 Years (15 Teachers)		11 to 20 Years (14 Teachers)		Over 20 Years (8 Teachers)			
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
Below normal	39	81	80	87	73	65	81	57	39	68	312	69
Normal	9	19	9	10	33	29	38	27	15	26	104	22
Above normal	0	0	3	3	7	6	24	16	3	6	37	9
All Groups	48	100	92	100	113	100	143	100	57	100	453	100

TABLE LXIX. NUMBER AND PER CENT OF MONROE COUNTY PUPILS IN GRADE 2 WHO ARE ABOVE NORMAL, NORMAL, AND BELOW NORMAL IN READING ACHIEVEMENT AS INDICATED BY THE HAGGERTY READING EXAMINATION, SIGMA 1, ANALYZED ON THE BASIS OF THE NUMBER OF YEARS OF TEACHING EXPERIENCE OF SECOND GRADE TEACHERS

Group	Teaching Experience										Total	
	1 Year (8 Teachers)		2 to 5 Years (15 Teachers)		6 to 10 Years (17 Teachers)		11 to 20 Years (11 Teachers)		Over 20 Years (7 Teachers)			
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
Below normal.....	12	16	37	29	53	34	27	27	8	40	137	29
Normal.....	40	54	57	44	58	38	27	27	5	25	187	39
Above normal.....	22	30	35	27	43	28	45	46	7	35	152	32
All Groups....	74	100	129	100	154	100	99	100	20	100	476	100

The analysis of the number and per cent by townships of the pupils in the first 3 grades who are below normal in reading achievement is shown in Tables LXX, LXXI, and LXXII. Figure 21 presents these data in graphic form.

From Figure 20 it appears that the townships of Indian Creek, Polk, and Salt Creek appear to contribute heavily to the amount of low achievement. However, when it is considered that these 3 townships contain

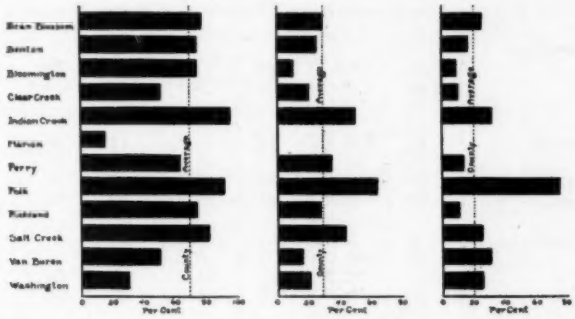


Figure 21. Per Cent below Normal in Reading in Monroe County in Grades 1, 2, and 3, by Townships.

TABLE LXX. NUMBER AND PER CENT OF PUPILS IN GRADE 1 IN EACH TOWNSHIP IN MONROE COUNTY WHO ARE ABOVE NORMAL, NORMAL, AND BELOW NORMAL IN READING ACHIEVEMENT, AS INDICATED BY THE HAGGERTY READING EXAMINATION, SIGMA 1

Township	Above Normal		Normal		Below Normal		Total Number
	Number	Per Cent	Number	Per Cent	Number	Per Cent	
Bean Blossom	2	4.0	9	17.6	40	78.4	51
Benton	2	6.4	6	19.4	23	74.2	31
Bloomington	5	8.9	10	17.9	41	73.2	56
Clear Creek	3	10.4	11	37.9	15	51.7	29
Indian Creek	0	0.0	1	5.3	18	94.7	19
Marion	0	0.0	5	83.3	1	16.7	6
Perry	19	16.4	23	19.8	74	63.8	116
Polk	0	0.0	3	9.1	30	90.9	33
Richland	1	2.4	10	24.4	30	73.2	41
Salt Creek	1	4.2	3	12.5	20	83.3	24
Van Buren	1	3.2	15	48.4	15	48.4	31
Washington	3	18.8	8	50.0	5	31.2	16
County	37	8.1	104	23.0	312	68.9	453

TABLE LXXI. NUMBER AND PER CENT OF PUPILS IN GRADE 2 IN EACH TOWNSHIP IN MONROE COUNTY WHO ARE ABOVE NORMAL, NORMAL, AND BELOW NORMAL IN READING ACHIEVEMENT, AS INDICATED BY THE HAGGERTY READING EXAMINATION, SIGMA 1

Township	Above Normal		Normal		Below Normal		Total Number
	Number	Per Cent	Number	Per Cent	Number	Per Cent	
Bean Blossom	11	26.2	19	45.2	12	28.6	42
Benton	5	31.2	7	43.8	4	25.0	16
Bloomington	35	44.3	36	45.6	8	10.1	79
Clear Creek	20	40.8	19	38.8	10	20.4	49
Indian Creek	1	3.8	13	48.1	13	48.1	27
Marion	1	100.0	0	0.0	0	0.0	1
Perry	37	34.2	34	31.6	37	34.2	108
Polk	1	2.8	12	34.3	22	62.9	35
Richland	19	45.2	12	28.6	11	26.2	42
Salt Creek	2	6.9	13	50.0	11	43.1	26
Van Buren	16	47.0	12	35.3	6	17.7	34
Washington	4	23.5	10	58.9	3	17.6	17
County	152	31.9	187	39.3	137	28.8	476

only 76 of the 453 first grade pupils in the county, it can be seen that the other townships with greater enrollment and with a per cent of below-normalness in excess of 68.9 (such as Bean Blossom, Benton, Bloomington, and Richland) influence to a much greater extent the county average. Figure 21 points out rather clearly, however, that the 3 townships, Indian Creek, Polk, and Salt Creek, are consistently below normal in all 3 grades. Special effort should be made in these 3 townships to emphasize rather strongly the improvement of reading.

Analysis of the chronological ages of the pupils in the first 3 grades is presented in Tables LXXIII, LXXIV, and LXXV. Any pupil in the first grade below 6 years of age on January 1, 1934 (i.e., at the end of the first semester of the school year) was considered moderately underage. There were no first grade pupils extremely underage. Only 30 of the 563 first grade pupils for whom ages were obtained were below 6 years of age on January 1, 1934. There is a slightly greater amount of underageness in the second and third grades but not enough to be of significance. The low achievement in reading ability in the first grade, therefore, cannot be attributed to underageness. In fact the composition of the first 3 grades, so far as chronological age is concerned, would seem to indicate that a higher than normal achievement should be expected because of a rather excessive chronological overageness. (Tables LXXIII to LXXV.)

TABLE LXXII. NUMBER AND PER CENT OF PUPILS IN GRADE 3 IN EACH TOWNSHIP IN MONROE COUNTY WHO ARE ABOVE NORMAL, NORMAL, AND BELOW NORMAL IN READING ACHIEVEMENT, AS INDICATED BY THE HAGGERTY READING EXAMINATION, SIGMA 1

Township	Above Normal		Normal		Below Normal		Total Number
	Number	Per Cent	Number	Per Cent	Number	Per Cent	
Bean Blossom	9	31.1	13	44.8	7	24.1	29
Benton	13	41.9	13	41.9	5	16.2	31
Bloomington	29	47.6	26	42.6	6	9.8	61
Clear Creek	23	47.9	20	41.7	5	10.4	48
Indian Creek	7	53.8	1	7.7	5	38.5	13
Marion	2	33.3	4	66.7	0	0.0	6
Perry	38	46.4	33	40.2	11	13.4	82
Polk	1	5.9	4	23.5	12	70.6	17
Richland	25	45.5	24	43.6	6	10.9	55
Salt Creek	7	30.4	10	43.5	6	26.1	23
Van Buren	12	30.8	15	38.4	12	30.8	39
Washington	6	37.5	6	37.5	4	25.0	16
County	172	41.1	169	40.3	79	18.6	420

TABLE LXXIII. NUMBER OF PUPILS IN THE FIRST GRADE WHO WERE OVERAGE, AT AGE, AND UNDERAGE CHRONOLOGICALLY IN MONROE COUNTY, JANUARY 1, 1934*

Township	Extremely Overage	Moderately Overage	At Age	Moderately Underage	Extremely Underage	Total
Bean Blossom	2	14	32	6	0	54
Benton	6	8	26	2	0	42
Bloomington	4	16	44	2	0	66
Clear Creek	1	8	53	1	0	63
Indian Creek	1	2	11	9	0	23
Marion	0	2	3	0	0	5
Perry	14	27	90	7	0	138
Polk	10	10	20	0	0	40
Richland	1	3	48	0	0	52
Salt Creek	1	5	14	0	0	20
Van Buren	1	4	26	2	0	33
Washington	1	6	19	1	0	27
County	42	105	386	30	0	563

* This table is read as follows: In Bean Blossom Township, of the 54 pupils in the first grade, 2 are extremely overage, 14 are moderately overage, 32 are at age, 6 are moderately underage, and 0 are extremely underage. For definitions of extremely and moderately overage and underage and at age, see the section devoted to age-grade progress.

TABLE LXXIV. NUMBER OF PUPILS IN THE SECOND GRADE WHO WERE OVERAGE, AT AGE, AND UNDERAGE CHRONOLOGICALLY IN MONROE COUNTY, JANUARY 1, 1934

Township	Extremely Overage	Moderately Overage	At Age	Moderately Underage	Extremely Underage	Total
Bean Blossom	5	8	29	3	1	46
Benton	1	4	11	1	0	17
Bloomington	12	17	56	2	0	87
Clear Creek	5	9	59	4	0	77
Indian Creek	1	5	17	6	1	30
Marion	0	0	0	0	0	0
Perry	29	30	58	12	0	129
Polk	10	12	13	1	0	36
Richland	0	6	46	1	0	53
Salt Creek	10	6	11	3	0	30
Van Buren	2	7	26	3	0	38
Washington	2	5	10	0	0	17
County	77	109	336	36	2	560

TABLE LXXV. NUMBER OF PUPILS IN THE THIRD GRADE WHO WERE OVERAGE, AT AGE, AND UNDERAGE CHRONOLOGICALLY IN MONROE COUNTY, JANUARY 1, 1934

Township	Extremely Overage	Moderately Overage	At Age	Moderately Underage	Extremely Underage	Total
Bean Blossom	2	12	24	1	0	39
Benton	2	10	12	7	0	31
Bloomington	10	21	32	3	0	66
Clear Creek	0	16	46	1	0	63
Indian Creek	0	4	5	4	0	13
Marion	0	1	4	0	0	5
Perry	12	28	67	12	0	119
Polk	6	11	3	0	0	20
Richland	2	15	36	10	0	63
Salt Creek	4	10	10	2	0	26
Van Buren	2	7	29	4	0	42
Washington	2	11	8	0	0	21
County	42	146	276	44	0	508

The distribution of educational ages in each of the first 3 grades in Table LXXVI is merely a reflection of the low achievement on the Haggerty Reading Examination and is further evidence that the chronological age of the pupils in the first 3 grades is not an outstanding factor in producing extremely low achievement in reading. Table LXXVII pre-

TABLE LXXVI. NUMBER AND PER CENT OF MONROE COUNTY PUPILS IN GRADES 1 TO 3 WHO, BY REASON OF THEIR AGE, SHOULD BE IN SOME OTHER GRADE*

Grade in Which Pupil Should be Enrolled	Grade 1				Grade 2				Grade 3			
	Chronological Age		Educational Age		Chronological Age		Educational Age		Chronological Age		Educational Age	
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
Below 1	124	23.0	342	77.2	15	2.7	124	25.5	....	....	15	3.8
1	371	69.0	99	22.3	131	23.7	125	25.7	21	4.2	125	32.0
2	221	40.1	60	13.5	334	60.6	189	38.8	113	22.6	89	22.8
3	60	11.1	19	4.2	195	35.3	150	28.1	266	53.3	151	38.7
4	16	2.9	3	.6	85	15.3	71	14.6	187	37.4	160	41.0
5	6	1.1	1	.2	46	8.3	22	4.5	88	17.6	94	24.1
6	6	1.1	....	....	10	1.8	....	....	26	5.2	8	2.0
7	2	.3	....	....	4	.7	....	....	22	4.4	....	....
8	....	....	....	....	....	....	....	....	6	1.2	....	....
9	....	....	....	....	....	....	....	....	1	.2	....	....
Total	538		443		551		486		499		390	

* This table is read as follows: Of the 538 pupils in the first grade 124, or 23.0 per cent, were of a chronological age of below 6½ years, the normal age for Grade 1; 371, or 69.0 per cent, were of a chronological age which would normally place them in the first grade; 221, or 40.1 per cent, were of a chronological age which would normally place them in the second grade, etc.

TABLE LXXVII. NUMBER AND PER CENT OF MONROE COUNTY PUPILS IN GRADES 1 TO 3 WHO ARE ABOVE NORMAL, NORMAL, AND BELOW NORMAL IN EDUCATIONAL QUOTIENTS

Group	Grade 1		Grade 2		Grade 3	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
Extremely above (over 130)	5	1.2	25	5.1	29	6.9
Moderately above (111-130)	29	6.7	116	23.9	114	27.3
Normal (91-110)	90	20.7	167	34.4	151	36.2
Moderately below (71-90)	180	41.5	91	18.7	95	22.7
Extremely below (below 71)	130	29.9	87	17.9	29	6.9
Total	434	100.0	486	100.0	418	100.0

sents the distribution of the educational quotients (educational age divided by chronological age, multiplied by 100) for the first 3 grades. Educational ages in this table and in other tables dealing with Grades 1, 2, and 3 are based upon reading age. The same definition of group limits given for intelligence quotients in Chapter IX is used for educational quotients in these tables. It will be noted that the per cent of pupils below normal in educational quotient in each grade corresponds roughly with the per cent of pupils below normal in reading, which shows that, when the factor of chronological age is considered, little change in the form of the distribution results.

In all the schools of the county the Indiana New-Type Test was given and graded by the teachers at the close of the first semester of the school year of 1933-34. These tests are prepared as the final examination given at the end of each semester. They are based upon the content of the various subject fields to be covered during the semester as indicated by the Indiana course of study. Test results are collected from a number of representative schools throughout the state and state medians and percentile ratings are calculated for each subject in each grade. The percentile rating for the median score in the state is represented by 50. When a score is given a percentile rating of 52 it indicates that 52 per cent of the scores included in the state distributions were lower than that score, or that 48 per cent of the scores were higher than that score.

The median score for Monroe County in first grade reading had a state percentile rating of 52, in the second grade of 52, and in the third grade of 47. According to these figures, the first and second grades of Monroe County were above the state medians in reading, and the third grade was below the state median.

These results are exactly contradictory to the results discovered by the Haggerty Reading Examination. However, it must be remembered

that the purposes of the two tests are different. The emphasis in the Indiana New-Type Test is placed upon a knowledge of the content of the selections outlined for study in these three grades. The Haggerty examination, on the other hand, presents new material with a view to determining the ability of the child to understand what he reads and to follow directions set forth in the reading material.

The amount of time devoted to the subject of reading might have something to do with the test results in reading. An analysis of the daily programs in the various schools of the county was made to discover the amount of time spent per week in recitation for each subject and grade. Table LXXVIII presents the number of minutes per week spent on reading recitations in each of the first three grades by types of schools and for the county as a whole. It will be seen that the lowest average is in the one-teacher schools and the averages increase as the number of teachers in the school increases.

Over 3 times as much time was spent on reading recitation in the 3 large schools as in the one-teacher schools. But this extra amount of time does not seem to increase the level of achievement in reading, for from Table LXVII it can be seen that 74.3 per cent of the pupils in one-teacher schools were below normal in reading as against 70.3 per cent of the pupils in the 3 large schools. Although there is some difference, it is so slight as to be of no significance. When the amount of time spent on reading recitations for the second and third grades is compared with the amount spent in the first grade it can be seen that there is a progressive decrease in the upper grades in almost every case. In spite of this decrease in emphasis, the per cent of pupils below normal also de-

TABLE LXXVIII. TIME ALLOTMENT IN MINUTES PER WEEK FOR READING IN GRADES 1 TO 3 IN EACH TYPE OF SCHOOL IN MONROE COUNTY *

Type of School	Grade 1		Grade 2		Grade 3	
	Number of Schools	Average Number of Minutes Per Week	Number of Schools	Average Number of Minutes Per Week	Number of Schools	Average Number of Minutes Per Week
One-teacher schools	40	83	39	76	39	78
Two-teacher schools	6	129	6	104	6	97
Three- and four-teacher schools	9	248	9	204	8	115
Over four-teacher schools	3	258	3	150	3	200
All Types	58	123	57	103	56	92

* This table is read as follows: In the 40 one-teacher schools for which daily programs were available, an average of 83 minutes per week was indicated in reading recitation in the first grade; etc.

creases in the upper grades in almost every case. It seems, therefore, that in general the amount of time spent in reading recitation is not an important factor in producing below-normalness in reading achievement.

From these various analyses there have been discovered no outstanding factors causing low reading achievement. The problem confronting the county superintendent and the primary teachers of the county, therefore, is one of further diagnosis of the difficulties of pupils in reading. It is suggested that a good diagnostic test in reading be given to the primary grades as soon as possible and that definite plans be worked out for emphasizing the teaching of reading in those aspects where weaknesses are discovered.

CHAPTER XII
EDUCATIONAL ACHIEVEMENT IN GRADES 4 TO 8

To determine the educational achievement of the pupils in the upper grades of Monroe County the Stanford Achievement Test, Advanced Examination, Form A, was given to Grades 4 to 8. Table LXXIX shows the number and per cent of the pupils in each grade who were administered the test. Of the 2,289 pupils enrolled in these grades, 2,058, or 89.9 per cent, took the test.

Not all parts of the test were given. The fundamental subjects of reading, arithmetic, and language usage were the parts of the test selected to measure achievement. The three phases of reading (paragraph meaning, sentence meaning, and word meaning) and the two phases of arithmetic (arithmetic computation and arithmetic reasoning), combined with a single test on language usage, made six distinct phases of achievement to be tested.

The tests were given to all schools under as nearly uniform conditions as could be secured. The papers were scored and the scores recorded on cards, one card for each individual pupil. The scores on each of the six parts of the test and the total score were then transformed into subject and educational ages, tabulated in this form by grades and by schools, and combined into township and county totals. The age equivalents for the scores were secured from the *Manual of Directions* accompanying the Stanford examination.

Table LXXX shows the county summaries of educational ages presented in the same form as a chronological age-grade table. It will be noted that the first three grades are included in this table. Data for these three grades are taken from the results of the Haggerty Reading Examination, Sigma 1, which have been converted into equivalent educational ages and are discussed in detail in Chapter XI. In reality the distribution for the first three grades in Tables LXXX-LXXXIV is a distribution of reading ages. However, the reading ages for these grades

TABLE LXXIX. NUMBER AND PER CENT OF MONROE COUNTY PUPILS IN GRADES 4 TO 8 EXAMINED BY THE STANFORD ACHIEVEMENT TEST

	Grade					Total
	4	5	6	7	8	
Number in grade.....	515	489	492	418	375	2,289
Number tested.....	443	429	439	385	362	2,058
Per cent tested.....	86.0	87.7	89.2	92.1	96.5	89.9

TABLE LXXX. EDUCATIONAL AGE-GRADE DISTRIBUTION OF BOYS IN MONROE COUNTY ELEMENTARY SCHOOLS

Educational Age	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Total
4½									
5	100	27	3	1					131
5½	63	35	6						104
6	11	22	3						36
6½	13	12	6						31
7	18	42	19	2					81
7½	7	33	21	1					62
8	9	23	23	3					58
8½	2	34	41	11	3	1		1	93
9		9	23	28	10	3	2		75
9½	1	10	30	40	14	5	1		101
10		5	29	58	21	8	2	1	124
10½	1	2	17	52	53	34	10	3	172
11		1	4	28	44	39	14	6	136
11½			1	11	37	40	27	13	129
12				2	15	24	23	11	75
12½				2	11	24	32	16	85
13					2	12	23	25	62
13½					1	9	9	12	31
14						7	13	9	29
14½					1	3	7	17	28
15							8	13	21
15½							6	18	26
16							3	13	16
16½								5	5
17								1	1
17½									
18								1	1
18½									
TOTAL	225	255	226	239	212	209	182	165	1713

in this study have been considered equivalent to educational ages and have been used as such. Normal ages for a grade have been determined in exactly the same manner as for the chronological age-grade study described in Chapter VIII; that is, 3 half-years are taken as normal with from 6 up to 7½ years as normal for the first grade, from 7 up to 8½ years as normal for the second grade, and so on. Beyond the normal age group are found two other groups of ages—the group extremely overage or underage and the group moderately overage or underage. The dividing line between these two groups was made the same as the dividing line on the chronological age-grade tables. The parts of the distribution between the solid lines indicate the normal pupils. Thus the parts of the distribution outside the dotted lines on Table LXXX represent extremely overage or underage pupils so far as educational achievement is concerned. The parts of the distribution between the dotted and the solid lines represent the moderately overage or underage pupils.

Tables LXXXI and LXXXII are companion tables of Table LXXX and show the distribution for boys and for girls.

When the distributions are arranged by grades, and in groups of normal and extremely and moderately overage and underage, Table LXXXIII results. From Tables LXXXIII and LXXXIV it can be seen that, of the 3,415 pupils for whom educational ages were determined, a total of 111 pupils, or 3.2 per cent, were extremely overage, while 978 pupils, or 28.6 per cent, were moderately overage. These pupils have been held back. They are capable of doing much better work than that

of the grade in which they are placed. However, by investigating the extremely overage pupils by grades, it can be seen that 72 of the 111 are in the first three grades. The moderately overage pupils, however, are not so grouped. With the exception of the first grade, where the moderate overageness is 6.5 per cent, the per cent moderately overage does not vary considerably from the average for the county.

With the exception of the second and third grades, there are very few who are extremely underage. These two grades account for 109 of the 120 extremely underage pupils in the county. There is considerable variation in the number of pupils who are moderately underage. In the first grade 68.6 per cent of the pupils are moderately underage. In the eighth grade 31.8 per cent of the pupils are moderately underage, while in the fourth only 4.3 per cent are moderately underage. These pupils who are educationally underage have been promoted too rapidly and are in too high a grade for their educational achievement. Further analysis of the data given in Table LXXXIV shows that there is a greater amount of educational overageness among girls than among boys, while the reverse is true of underageness. Figure 22 presents the data of Table LXXXIV in diagram form. Figure 23 shows in diagram form the distribution of educational ages of the pupils in each grade beginning with the fourth grade.

TABLE LXXXI. EDUCATIONAL AGE-GRADE DISTRIBUTION OF GIRLS IN MONROE COUNTY ELEMENTARY SCHOOLS

Educational Age	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Total
4½									
5	74	10	1						85
5½	70	22	1						93
6	25	8	1						34
6½	18	10							28
7	15	32	8						55
7½	9	33	10						52
8	4	27	12			1			43
8½	4	40	45	4		1			64
9		17	21	23	2	1			110
9½	2	19	43	34	9	2	1		114
10		11	28	43	20	8	2	2	160
10½	1	4	22	57	54	34	8		147
11			4	23	62	42	10	6	134
11½				14	32	38	33	17	107
12				5	14	39	32	17	93
12½				1	13	29	24	26	57
13					8	17	17	15	49
13½					1	7	18	23	34
14					2	3	13	16	38
14½							16	22	37
15						6	12	19	30
15½						3	13	14	17
16							4	13	4
16½								4	2
17								2	1
17½								1	
18									
18½									
TOTAL	222	233	196	204	217	230	203	197	1702

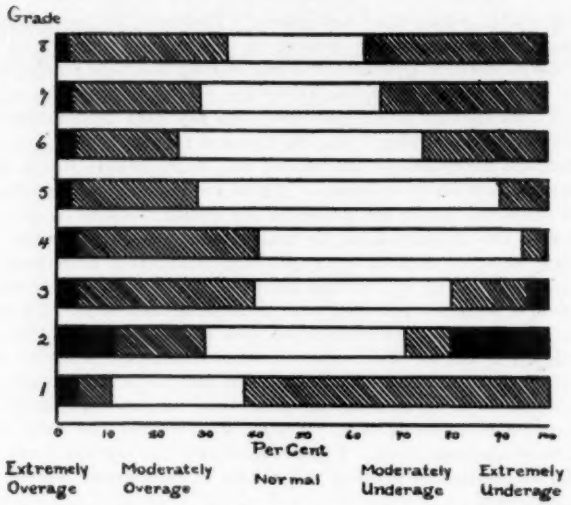


Figure 22. Educational Overageness, Normal-ageness, and Underageness in Monroe County Elementary Schools.

TABLE LXXXII. EDUCATIONAL AGE-GRADE DISTRIBUTION OF BOYS AND GIRLS IN MONROE COUNTY ELEMENTARY SCHOOLS

Educational age	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Total
4½									
5	174	37	4	1					216
5½	133	57	7						197
6	36	30	4						70
6½	31	22	6						59
7	33	74	27	2					136
7½	16	66	31	1					114
8	13	50	35	3					101
8½	6	74	86	15	3	2		1	187
9		26	44	51	12	4	2		139
9½	3	29	73	74	23	7	2		211
10		16	57	101	41	16	4	3	238
10½	2	6	39	109	107	68	18	3	352
11		1	8	51	106	81	24	12	283
11½			1	25	69	78	60	30	263
12				7	29	63	55	28	182
12½				3	24	53	56	42	178
13					10	29	40	40	119
13½					2	16	27	35	80
14					2	10	26	25	63
14½					1	3	23	39	66
15						6	20	32	58
15½						3	21	32	56
16							7	26	33
16½								9	9
17								3	3
17½								1	1
18								1	1
18½									
TOTAL	447	488	422	443	429	439	385	362	3,415

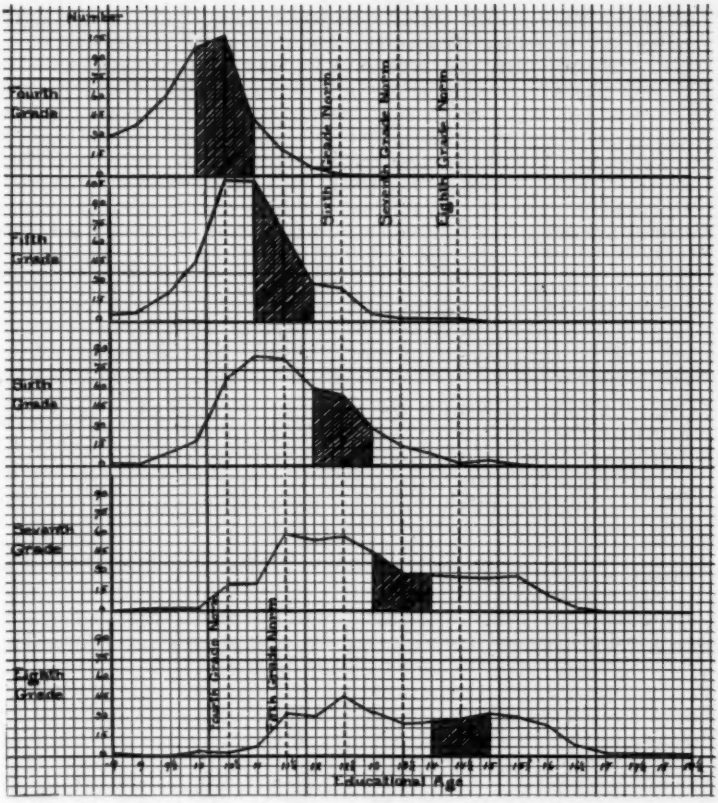


Figure 23. Overlapping of Educational Ages of Pupils in Grades 4 to 8 in Monroe County.

TABLE LXXXIII. NUMBER OF BOYS AND GIRLS WHO ARE EDUCATIONALLY OVERAGE, NORMAL, AND UNDERAGE IN MONROE COUNTY ELEMENTARY SCHOOLS

Degree of Ageness	Grade								Total
	1	2	3	4	5	6	7	8	
Extremely overage.....	11	52	9	10	5	12	7	5	111
Moderately overage....	29	100	169	185	132	108	117	138	978
Normal.....	100	190	165	226	254	222	151	100	1,408
Moderately underage...	307	52	64	19	38	95	108	115	798
Extremely underage....	0	94	15	3	0	2	2	4	120
All Groups.....	447	488	422	443	429	439	385	362	3,415

TABLE LXXXIV. PER CENT OF BOYS AND GIRLS WHO ARE EDUCATIONALLY OVERAGE, NORMAL, AND UNDERAGE IN MONROE COUNTY ELEMENTARY SCHOOLS

Degree of Ageness	Grade								Total
	1	2	3	4	5	6	7	8	
Extremely overage	2.5	10.6	2.1	2.2	1.2	2.7	1.8	1.4	3.2
Moderately overage	6.5	20.5	40.0	41.8	30.7	24.6	30.4	38.1	28.6
Normal	22.4	38.9	39.1	51.0	59.2	50.6	39.2	27.6	41.2
Moderately underage	68.6	10.6	15.2	4.3	8.9	21.6	28.1	31.8	23.5
Extremely underage	0.0	19.4	3.6	.7	0.0	.5	.5	1.1	3.5
All Groups	13.1	14.3	12.4	13.0	12.5	12.8	11.3	10.6	100.0

TABLE LXXXV. NUMBER OF PUPILS IN GRADES 4 TO 8 IN MONROE COUNTY WHO, BY REASON OF THEIR EDUCATIONAL AGE, SHOULD BE IN SOME OTHER GRADE, DISTRIBUTED ON THE BASIS OF THE GRADES IN WHICH THEY SHOULD BE ENROLLED *

Grade in Which Pupils Should be Enrolled	Grade in Which Pupils are Enrolled				
	4	5	6	7	8
1	3	.....	.....	.....	.....
2	6	.....	.....	.....	.....
3	69	15	6	2	1
4	226	76	27	8	3
5	261	254	165	46	18
6	83	204	222	139	70
7	10	63	145	151	110
8	.....	14	55	93	100
9	.....	3	19	69	96
10	.....	.....	9	48	90
11	.....	.....	.....	7	38
12	.....	.....	.....	.....	5
13	.....	.....	.....	.....	1
Number in Grade	443	429	439	385	362

* This table is read as follows: Of the 443 pupils in the fourth grade 3 have an educational age that is normal for the first grade, 6 for the second grade, 69 for the third grade, 226 for the fourth grade, 261 for the fifth grade, etc.

A slightly different picture of the distribution of educational ages is shown in Tables LXXXV and LXXXVI. In Table LXXXV the pupils enrolled in each grade are distributed on the basis of the grade for which their ages are normal. Since 3 half-years are allowed as normal for

each grade, there is some overlapping and the total of each column is considerably greater than the number of pupils enrolled in that grade. For example, the normal age for the second grade falls in the 3 half-year age groups beginning at 7, 7½, and 8, while the normal age for the third grade falls in the 3 half-year age groups beginning at 8, 8½, and 9. There is, therefore, an overlapping in these 2 grades of all the pupils in the half-year age group beginning at 8 years. Thus there are 2 pupils in the fourth grade with educational ages of 7 years, 1 with an age of 7½, 3 with ages of 8, 15 with ages of 8½, and 51 with ages of 9. With this distribution there are 6 pupils with an age equivalent to that of the second grade and 69 with an age equivalent to that of the third grade.

From Table LXXXV it can be seen that the spread of achievement is greatest in the eighth grade. There was 1 boy in the eighth grade with an educational age which normally would place him in the third grade, and another boy with an educational age which normally would place him in the freshman year of college. Even as low as the fifth grade there are 3 pupils of sufficient educational age to place them in high school. In the 4 upper grades of the elementary school there are 290 pupils, of a total of 1,615 pupils tested in these grades, who are capable of doing high school work. These 290 pupils are found in the various grades as follows: 3 in the fifth, 22 in the sixth, 97 in the seventh, and 168 in the eighth. Of this group, 187 are capable of doing the work of the ninth grade; 147, that of the tenth grade; 45, that of

TABLE LXXXVI. NUMBER OF PUPILS IN GRADES 4 TO 8 IN MONROE COUNTY WHO, BY REASON OF THEIR EDUCATIONAL AGE, SHOULD BE IN SOME OTHER GRADE, DISTRIBUTED ON THE BASIS OF THE GRADE IN WHICH THEY ARE ACTUALLY ENROLLED *

Grade in Which Pupils Actually are Enrolled	Grade in Which Pupils Should be Enrolled				
	4	5	6	7	8
1	3	2	.....	.....	.....
2	71	23	1	.....	.....
3	174	104	9	.....	.....
4	226	261	83	10	.....
5	76	254	204	63	14
6	27	165	222	145	55
7	8	46	139	151	93
8	3	18	70	110	100
Total	578	873	728	479	262

* This table is read as follows: Of the 578 pupils in the county who have an educational age normal for the fourth grade, 3 are actually enrolled in the first grade, 71 in the second grade, 174 in the third grade, 226 in the fourth grade, etc.

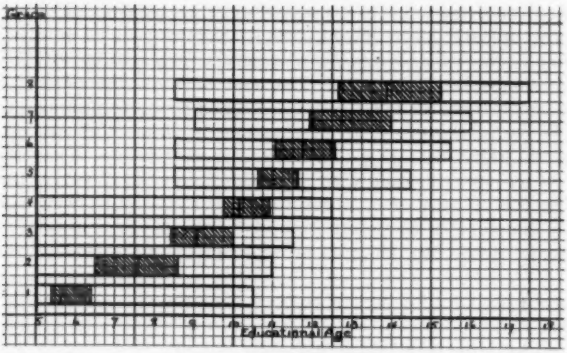


Figure 24. Educational Ages of the Pupils in Each Grade in Monroe County, the Range in Ages, the Middle 50 Per Cent, and the Median Educational Age.

the eleventh grade; 5, that of the twelfth grade; and 1, that of the thirteenth grade. It is not assumed that these children should be in the grades indicated, but merely that they achieved on the test given to a level normal for those grades.

A slightly different analysis is found in Table LXXXVI. In this table all the pupils with educational ages that are normal for the fourth grade are listed in the first vertical column. But of the 578 pupils with normal fourth grade educational ages, 3 are actually enrolled in the first grade, 71 in the second grade, 174 in the third grade, etc. In this table, as in Table LXXXV, the overlapping of normal ages for a grade by 1 half-year makes the totals of the last horizontal line in the table amount to considerably more than the actual number of pupils in the grades concerned. It is significant from this table that a wide distribution of educational ages in each grade exists. On the one hand it can be seen that there are 3 children with fourth grade achievement enrolled in the eighth grade, and on the other hand 1 child with sixth grade achievement is enrolled in the second grade. Children with fifth grade achievement appear particularly poorly distributed, for there are more pupils with fifth grade achievement enrolled in the fourth grade than there are in the fifth grade.

Figure 24 is presented to show that while the spread in educational ages for the pupils in the various grades is rather extreme, yet if only the middle 50 per cent of the children in each grade is considered, the spread is satisfactory and progress through the grades is normal.

In order to determine if particular townships of the county were responsible for the poor distribution of educational overageness and underageness, Tables LXXXVII and LXXXVIII were prepared. From Table LXXXVIII it can be seen that Polk Township has 60.1 per cent of its pupils below normal in educational age; that is to say, 60.1 per cent of the pupils in this township are placed in a higher grade than the achievement test results place them. Other townships rank in this re-

TABLE LXXXVII. NUMBER OF PUPILS IN MONROE COUNTY WHO ARE ABOVE NORMAL, NORMAL, AND BELOW NORMAL IN EDUCATIONAL AGE AS INDICATED BY THE TESTING PROGRAM

Township	Boys			Girls			Total		
	Above Normal	Normal	Below Normal	Above Normal	Normal	Below Normal	Above Normal	Normal	Below Normal
Bean Blossom	27	63	57	43	67	48	70	130	105
Benton	26	56	29	28	43	37	54	99	66
Bloomington	70	100	51	98	110	43	168	210	94
Clear Creek	56	73	50	64	81	33	120	154	83
Indian Creek	20	36	37	21	25	28	41	61	65
Marion	7	8	2	1	6	1	8	14	3
Perry	143	136	103	174	127	83	317	263	186
Polk	3	23	57	4	41	50	7	64	107
Richland	53	78	56	69	82	33	122	160	89
Salt Creek	14	36	33	15	41	19	29	77	52
Van Buren	45	58	31	55	52	18	100	110	49
Washington	31	31	14	22	35	5	53	66	19
Total	495	698	520	594	710	398	1,089	1,408	918

TABLE LXXXVIII. PER CENT OF PUPILS WHO ARE ABOVE NORMAL, NORMAL, AND BELOW NORMAL IN EDUCATIONAL AGE IN THE TOWNSHIPS OF MONROE COUNTY

Township	Above Normal	Normal	Below Normal
Bean Blossom	23.0	42.6	34.4
Benton	24.7	45.2	30.1
Bloomington	35.6	44.5	19.9
Clear Creek	33.6	43.2	23.2
Indian Creek	24.6	36.5	38.9
Marion	32.0	56.0	12.0
Perry	41.4	34.2	24.4
Polk	3.9	36.0	60.1
Richland	32.6	43.4	24.0
Salt Creek	18.4	48.7	32.9
Van Buren	38.6	51.5	9.9
Washington	38.4	47.8	13.8
County	31.9	41.2	26.9

spect in the following order from the greatest to the least amount of below-normalness: Indian Creek, Bean Blossom, Salt Creek, Benton, Perry, Richland, Clear Creek, Bloomington, Washington, Marion, and Van Buren. On the other hand Perry Township has the greatest amount of overageness, that is to say, 41.4 per cent of the pupils in Perry Township, as shown by the achievement tests, are capable of doing work in a higher grade than that in which they are now enrolled. Other townships rank in this respect, in the following order from the greatest to the least amount of overageness: Van Buren, Washington, Bloomington, Clear Creek, Richland, Marion, Benton, Indian Creek, Bean Blossom, Salt Creek, and Polk. Van Buren Township has the greatest amount of normal-ageness while Perry Township has the least.

For comparative purposes Form B of the Stanford Achievement Test was given in Grades 4 to 7 in the Bloomington city schools. The median educational ages were calculated for each grade and these medians were converted into grade terms. Table LXXXIX shows the comparison of the results in the Bloomington city schools with the results in the county schools. From this table for the three grades in which comparison can be made, the city schools are considerably above the county schools in average achievement.

The achievement of the fourth grade pupils in the Bloomington city schools is 5.1. This means that these pupils, half way through the fourth grade, did work of a quality equal to that usually done by pupils one-tenth of the way through the fifth grade. In the county schools the achievement of the fourth grade is 4.4. Since the tests were given at the middle of the school year, the grade standard would be 4.5.

Normal achievement in the fifth grade would be 5.5. In the city schools, the fifth grade achievement was 5.8, while in the county schools it was only 5.2.

In the sixth grade, where normal achievement is 6.5, the city schools showed an achievement of 7.0 as compared with 5.9 in the county schools.

When compared with the grade standards of 4.5, 5.5, and 6.5 it can be seen that in each case the city schools are above the grade standard while the county schools are below the grade standard. By consulting the 1923 Indiana State survey, comparisons of achievement are also available. The township schools throughout the state in 1923 reached an achievement in the fifth grade of 4.6 as compared with 5.2 in the Monroe County schools in 1934. The 1923 achievement in the seventh grade was 6.1 as compared with 7.1 in Monroe County, a full grade increase. In the eighth grade the increase is a little more marked, the 1923 achievement being 6.8 as compared with 8.0 in Monroe County in 1934.

Up to this point the composite or total scores on the achievement test have been considered. To determine the points at which weakness in instruction is responsible for low total achievement, analyses have been made of the results on each phase of the three subjects tested. As has been indicated, distributions were made of the subject ages on each of the six phases of achievement tested. From these distributions was constructed Table XC, which shows the number of pupils in each grade above normal, normal, and below normal on each of the six parts of the test. From this table Figure 25 was made to show graphically the

amounts of above-normalness, normalness, and below-normalness in each of the three major subjects and the total or composite score.

The county summary or medians are presented in Table XCI. From this table it can easily be seen that in but few cases are the county medians above the standard. In the fourth grade achievement is above standard in word meaning, arithmetic computation, and arithmetic. In the fifth grade achievement is above standard in arithmetic computation, arithmetic reasoning, and arithmetic. The sixth grade achievement is below standard in all subjects. The seventh grade is above standard in language usage only. The eighth grade is above standard in arithmetic computation and language usage. These medians for the county on the various phases of the testing program are graphically shown in Figure 26. This figure and the figures following show achievement by grades in each township and are most illuminating. They show clearly the points of attack for improving instruction in the county.

TABLE LXXXIX. COMPARISON OF COMPOSITE ACHIEVEMENT FOR INDIANA IN 1923 AND FOR MONROE COUNTY AND BLOOMINGTON CITY IN 1934 IN TERMS OF GRADE STANDARDS

	Standard Reached by Grade				
	4	5	6	7	8
Indiana 1923*—					
Townships	.....	4.6	.....	6.1	6.8
Towns	.....	4.7	.....	6.3	6.9
Cities	.....	5.1	.....	7.0	7.7
Monroe County 1934	4.4	5.2	5.9	7.1	8.0
Bloomington City 1934	5.1	5.8	7.0	.....	.....
Standard	4.5	5.5	6.5	7.5	8.5

* The data for Indiana for 1923 were adapted from Table V, page 14, *Public Education in Indiana*, by the Indiana Education Commission (published by the General Education Board, New York, 1923) and were based upon a composite score consisting of reading (Thorndike-McCall Reading Scale), spelling (Ashbaugh Spelling Scale), and arithmetic (Woody Addition and Multiplication Scales). The 1934 data were from the composite of the reading, arithmetic, and language usage parts of the Stanford Achievement Test.

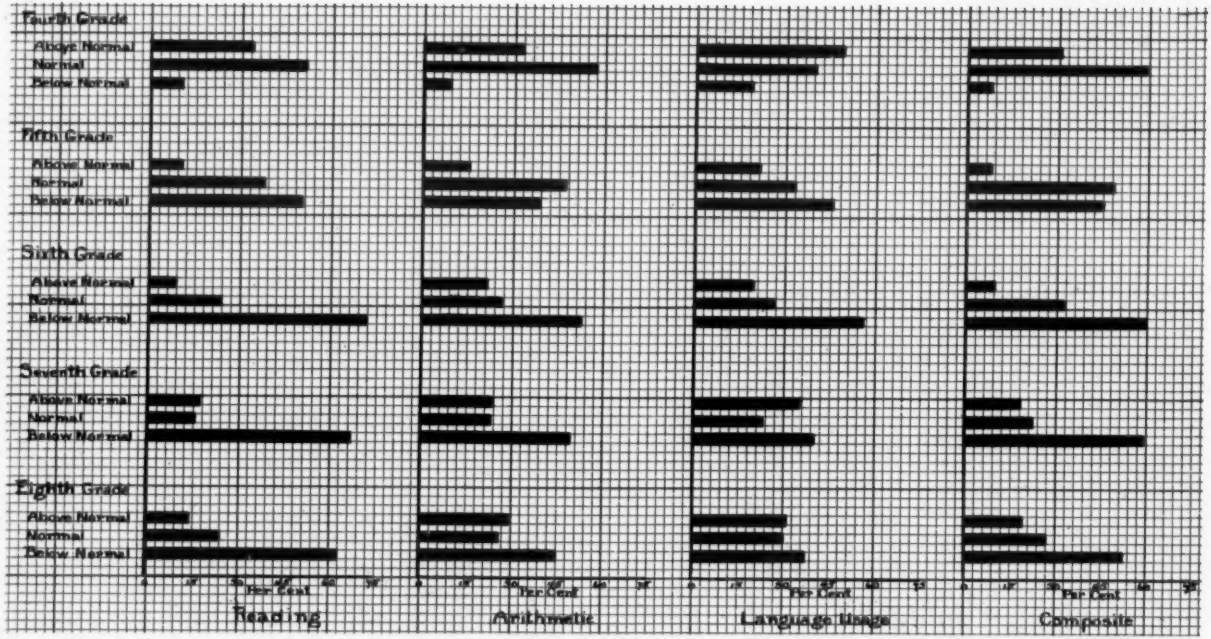


Figure 25. Per Cent of Pupils Who are above Normal, Normal, and below Normal in Reading, Arithmetic, Language Usage, and Total Score in Grades 4 to 8 in Monroe County, as Indicated by the Stanford Achievement Test.

TABLE XC. NUMBER AND PER CENT OF MONROE COUNTY PUPILS WHO ARE ABOVE NORMAL, NORMAL, AND BELOW NORMAL AS INDICATED BY THE STANFORD ACHIEVEMENT TEST

TABLE XC. NUMBER AND PER CENT OF MONROE COUNTY PUPILS WHO ARE ABOVE NORMAL, NORMAL, AND BELOW NORMAL AS INDICATED BY THE STANFORD ACHIEVEMENT TEST

Group	Paragraph Meaning		Sentence Meaning		Word Meaning		Reading		Arithmetic Computation		Arithmetic Reasoning		Arithmetic		Language Usage		Total	
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
Fourth Grade (441 Pupils)																		
Above	71	16.1	79	17.9	37	8.4	45	10.2	58	13.2	63	14.3	42	9.5	77	17.5	36	8.1
Normal	175	39.7	174	39.5	290	65.8	234	53.1	229	51.9	199	45.1	252	57.2	176	39.9	260	59.0
Below	195	44.2	188	42.6	114	25.8	162	36.7	154	34.9	179	40.6	147	33.3	188	42.6	145	32.9
Fifth Grade (434 Pupils)																		
Above	56	12.9	68	15.7	33	7.6	43	9.9	47	10.8	68	15.7	64	14.7	94	21.7	34	7.9
Normal	159	36.6	131	30.2	232	53.5	158	36.4	226	52.1	202	46.5	203	46.8	142	32.7	208	47.9
Below	219	50.5	235	54.1	169	38.9	233	53.7	161	37.1	164	37.8	167	38.5	198	45.6	192	44.2
Sixth Grade (445 Pupils)																		
Above	83	18.6	60	13.5	26	5.8	39	8.8	125	28.1	84	18.9	92	20.7	85	19.1	38	8.5
Normal	117	26.3	88	19.8	107	24.1	105	23.6	82	18.4	147	33.0	114	25.6	107	24.0	144	32.4
Below	245	55.1	297	66.7	312	70.1	301	67.6	238	53.5	214	48.1	239	53.7	253	56.9	263	59.1
Seventh Grade (387 Pupils)																		
Above	108	27.9	83	21.4	53	13.7	65	16.8	126	32.6	81	20.9	101	26.1	134	34.7	70	18.1
Normal	80	20.7	44	11.4	56	14.5	62	16.0	60	15.5	116	30.0	96	24.8	93	24.0	92	23.8
Below	199	51.4	260	67.2	278	71.8	260	67.2	201	51.9	190	49.1	190	49.1	160	41.3	225	58.1
Eighth Grade (356 Pupils)																		
Above	83	23.3	69	19.4	31	8.7	43	12.1	139	39.0	81	22.8	106	29.8	114	32.0	72	20.2
Normal	90	25.3	72	20.2	69	19.4	88	24.7	65	18.3	73	20.5	89	25.0	109	30.6	95	26.7
Below	183	51.4	215	60.4	256	71.9	225	63.2	152	42.7	202	56.7	161	45.2	133	37.4	189	53.1

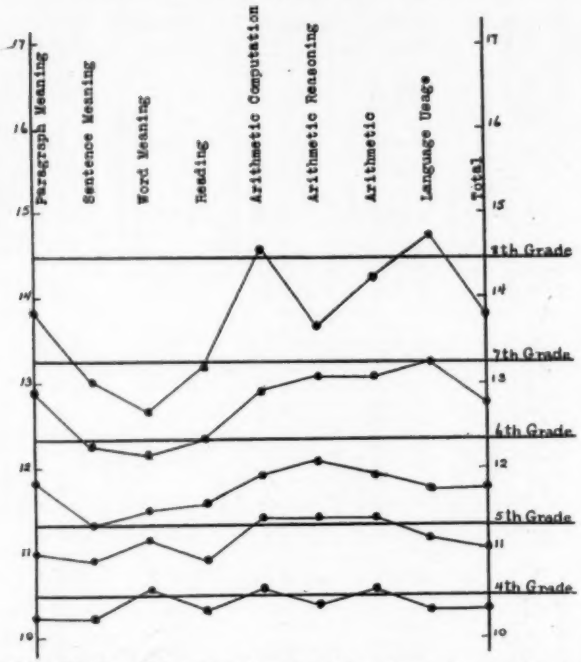


Figure 26. Median Educational and Subject Ages for Grades 4, 5, 6, 7, and 8 in Monroe County as Indicated by the Stanford Achievement Test.

TABLE XCI. MEDIAN EDUCATIONAL AGES IN MONROE COUNTY AS INDICATED BY THE STANFORD ACHIEVEMENT TEST

Subject	Grade				
	4	5	6	7	8
Paragraph Meaning	10–3	11–0	11–10	11–12	13–10
Sentence Meaning	10–3	10–11	11–4	12–3	13–0
Word Meaning	10–7	11–2	11–6	12–2	12–8
Reading	10–4	10–11	11–7	12–4	12–3
Arithmetic Computation	10–7	11–5	11–11	12–11	14–7
Arithmetic Reasoning	10–4	11–5	12–1	13–1	13–9
Arithmetic	10–7	11–5	11–11	13–1	14–3
Language Usage	10–4	11–2	11–9	13–4	14–9
Total	10–4	11–1	11–9	12–9	13–10
Standard	10–6	11–4	12–4	13–3	14–6

The county graph shows at once a striking deficiency in reading achievement. The deficiency has been discussed for the 3 lower grades. Beginning with a slightly below normal achievement in the fourth grade, the deficiency becomes greater and greater until the eighth grade is reached, where the achievement is over a full grade below standard. In the three phases of reading, achievement is best in paragraph meaning and poorest in word meaning. In arithmetic, achievement is slightly above normal in the fourth and fifth grades and somewhat below normal in the 3 upper grades. In language usage, achievement is slightly below

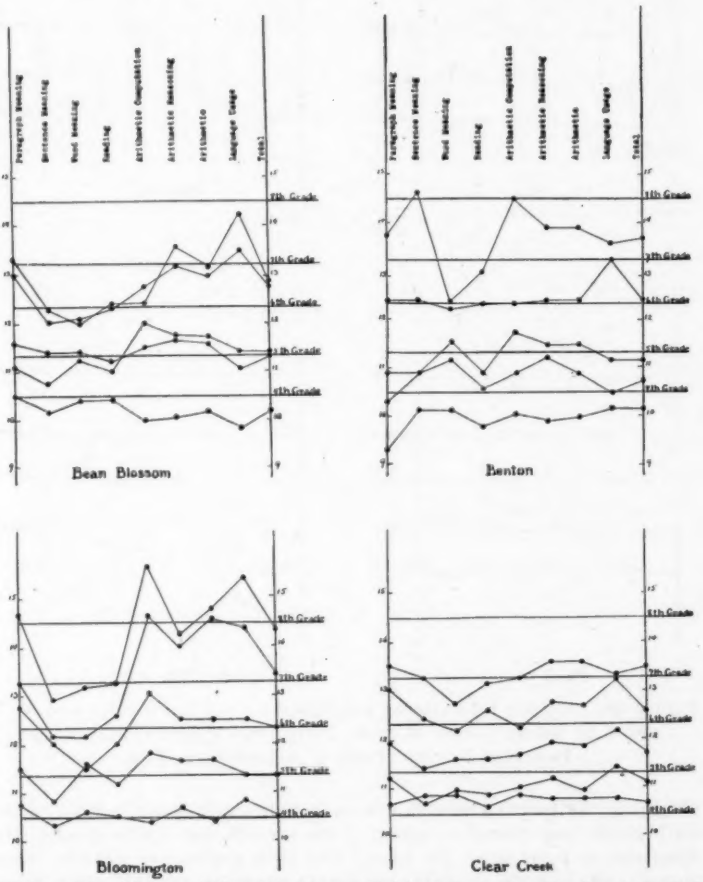


Figure 27. Median Educational and Subject Ages for Grades 4, 5, 6, 7, and 8 in Bean Blossom, Benton, Bloomington, and Clear Creek Townships as Indicated by the Stanford Achievement Test.

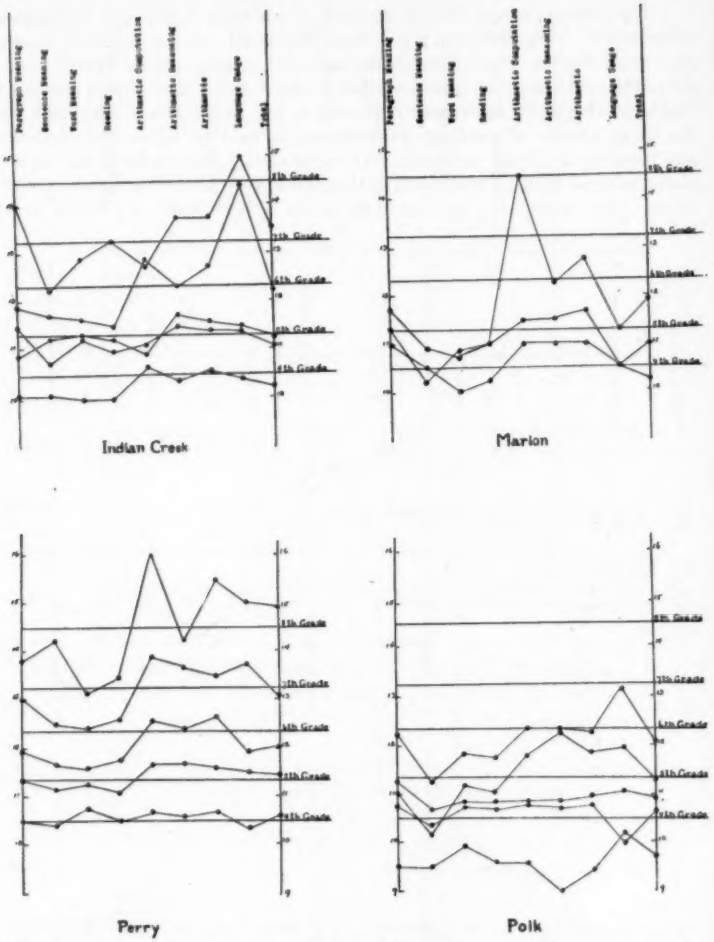


Figure 28. Median Educational and Subject Ages for Grades 4, 5, 6, 7, and 8 in Indian Creek, Marion, Perry, and Polk Townships, as Indicated by the Stanford Achievement Test.

normal in the fourth and fifth grades, a half grade below normal in the sixth grade, and normal or above in the seventh and eighth grades. In composite or total score the fourth and fifth grades are slightly below normal and the sixth, seventh, and eighth grades are a half grade below normal.

Some striking examples of faulty classification are evident from the township graphs of achievement. In Figure 30 the sixth and seventh

grades of Richland Township, almost all the pupils of which are enrolled in the Ellettsville school, are so nearly alike in achievement that they could very well be combined. Suppose that the better pupils of the sixth grade were combined with the seventh grade and that the poorer pupils of the seventh grade were combined with the sixth grade. Figure 30 shows the distribution of the two grades as they are and as they would be with 10 sixth grade pupils transferred to the seventh grade and 6 seventh grade pupils transferred to the sixth grade. Such an arbitrary

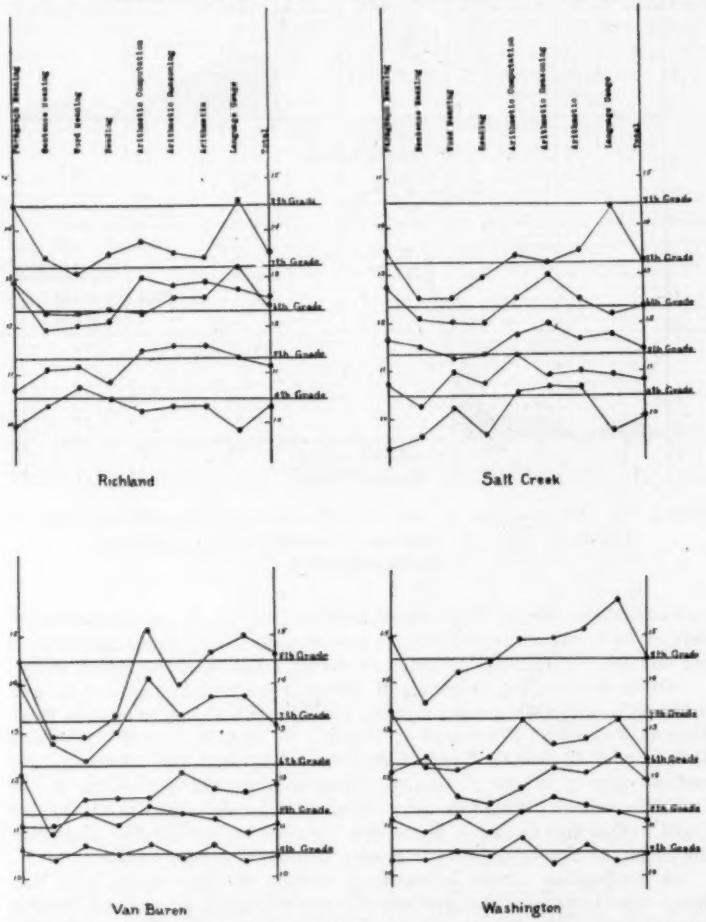


Figure 29. Median Educational and Subject Ages for Grades 4, 5, 6, 7, and 8 in Richland, Salt Creek, Van Buren, and Washington Townships, as Indicated by the Stanford Achievement Test.

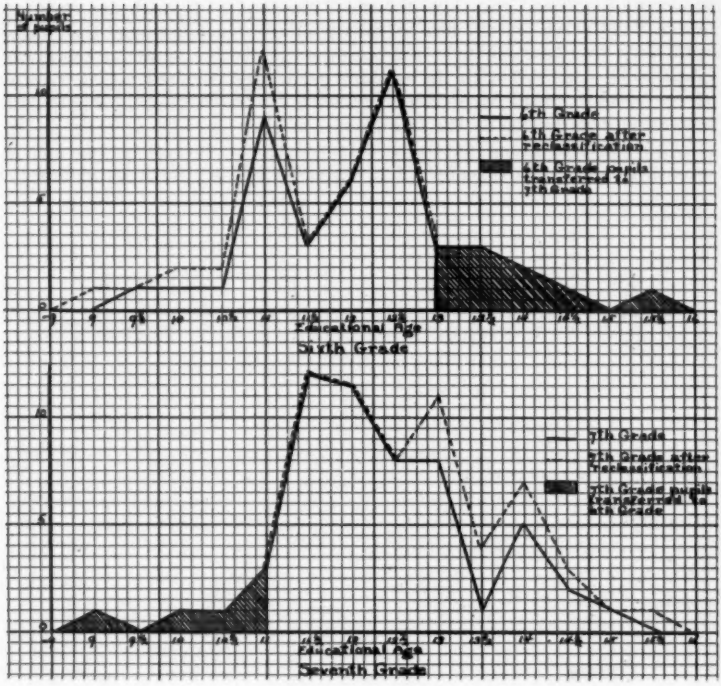


Figure 30. Comparison of the Distributions of Educational Age in Grades 6 and 7 of Richland Township and a Suggested Reclassification.

reclassification should not be made, however, unless proper consideration were given to the chronological and mental ages of the pupils transferred and any other contributory factors in the adjustment of individual pupils.

Other outstanding examples of the need for reclassification are seen in the fifth and sixth grades and the seventh and eighth grades in Bean Blossom Township, illustrated in Figures 31 and 32, and the fifth and sixth grades in Indian Creek Township. The first two examples are confined largely to the Stinesville school and the third example to the Kirksville school. Certainly very definite steps should be taken by the school authorities in the 3 townships involved to remedy the classification of pupils and to adjust the grades to a more normal status.

A comparison of the educational profiles of Clear Creek and Van Buren townships provides grounds for speculation and perhaps further investigation. The fourth grade of Clear Creek Township is slightly higher in achievement than the fourth grade of Van Buren Township. The fifth grade profiles are almost parallel. But in each of the upper 3 grades the achievement in Van Buren Township is dictinctly superior to

the achievement in Clear Creek Township. There are 7 one-teacher and 2 two-teacher schools in Van Buren Township. In Clear Creek Township all the schools have been consolidated in a four-teacher school at Harrodsburg and a consolidated elementary and high school at Smithville. Unless further investigation reveals conditions not within the control of the form of school organization, it could be inferred that one-teacher schools are superior in efficiency to consolidated schools. However, 2 other townships, Polk and Salt Creek, whose profiles are shown in Figures 27 and 28, also have all one-teacher schools but show in all grades distinctly inferior achievement when compared with the results in Clear Creek Township. The differences indicated may be accounted for in part by the status of the people in the 2 townships, rather than by the types of school organization in use.

In spite of the very evident lagging in educational age below the normal, especially in the upper grades, the most striking discovery with respect to subject ages is the fact that reading achievement in all its phases, and especially in sentence and word meaning, is extremely below achievement in both arithmetic and language usage. It is clear that insufficient emphasis is placed upon reading in the schools of the county. Few of the one- and two-teacher schools have either libraries of supple-

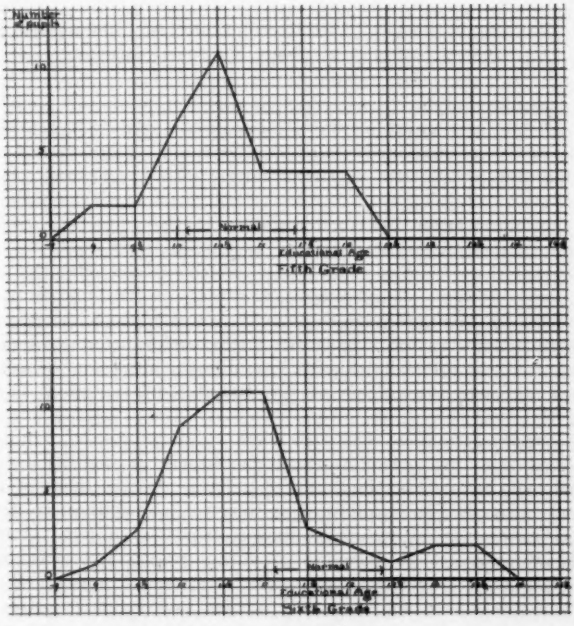


Figure 31. Comparison of the Distributions of Educational Age in Grades 5 and 6 of Bean Blossom Township.

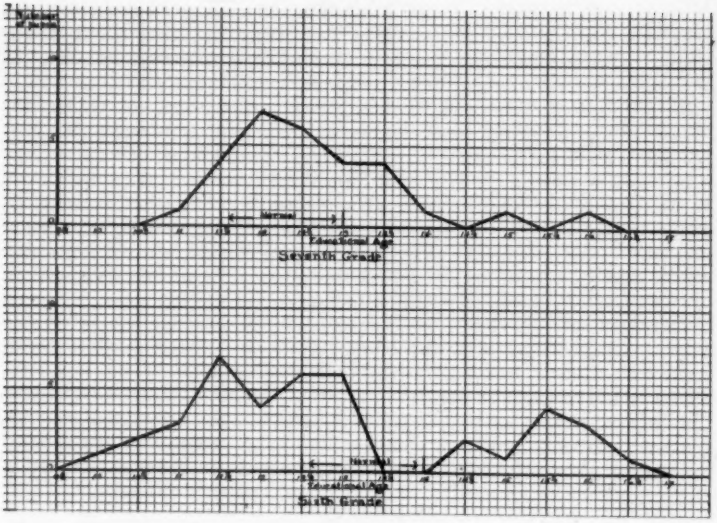


Figure 32. Comparison of the Distributions of Educational Age in Grades 7 and 8 of Bean Blossom Township.

mentary reading material or access to such libraries and many of the larger schools have anything but an adequate supply of such material. In many cases the examiners found no dictionary of any kind within the school building and seldom was there any kind of reference material to be discovered.

It is evident from other sources that on the whole the schools are proficient in spelling. Yet the tests seem to indicate that the children are being taught to spell without the slightest knowledge of the meaning of the words spelled. Furthermore, the test results indicate a normal achievement in language usage without a knowledge of the meaning of the sentences constructed. Lack of normal achievement in reading is reflected very clearly in arithmetic reasoning achievement wherein success depends upon recognition of the meaning of sentences and paragraphs.

It is certain that the major problem of instruction confronting the school officials of the county is the improvement of reading. Such improvement can be accomplished by (1) shifting the emphasis of instruction from the mechanical studies of arithmetic computation, spelling, and grammar to reading and the correlation of other subjects toward the objective of improved reading; (2) providing schools and school children with dictionaries, reference works, and a generous supply of supplementary reading materials carefully chosen and properly graded; (3) instituting a constructive and interesting in-service training program for teachers to the end that teachers may become "reading-conscious" and that the common difficulties of the learning of reading may be discovered

and their remedies practiced on the pupils of the county; and (4) developing a continuous testing program in reading that will serve both as a diagnostic instrument in locating reading difficulties and at the same time as a check on the progress made in the improvement of reading.

Comparison has already been made between the composite achievement in the schools of the county and in the schools of Bloomington. Table XCII shows the comparison between the two groups of schools by subjects. In the Bloomington city schools the tests were given in February just after the second semester began. The *A* sections of each grade, therefore, are comparable with the respective grades of the county while the *B* sections are a half year behind. This fact should be kept in mind in reading Table XCII and Figure 33. It is clear from Figure 33 that in every subject tested and in each grade the children of the Bloomington city schools are distinctly superior in achievement to those in the county. The 5*A* section of Bloomington is only slightly below the sixth grade of the county in composite score and is above the sixth grade of the county in paragraph and sentence meaning, reading, and language usage.

One noticeable likeness in the comparison between the results on the achievement test in the Bloomington city schools and those in the county schools is the lag below grade level in the word meaning phase of the reading test. This lag has already been discussed in relation to the county achievement. The fact that it is apparent in the city results might indicate either that the test is not adapted to the curriculum in the schools at the present time or that lack of emphasis on this phase of reading is a common weakness in instruction. Nevertheless this lag does not invalidate the obvious superiority of achievement in the city schools when compared with the county schools.

One factor which is very important in the comparison of achievement in the city and county schools is that of the time element. Table XCIII has been prepared to show the differences in total amount of time spent in school, assuming regular promotion, by children in all grades and sections at the beginning of the second semester in the city schools. Figure 34 presents the differences in graphic form. It can be seen from the table that the sixth grade of the county has spent exactly the same amount of time in school as the *B* section of the sixth grade in the city school and is therefore a full half grade behind the 6*A* section. Certainly part of the difference in achievement in favor of the Bloomington city schools is due to this difference in time.

The elementary school life of the child in an eight-months' school is just eight months less than that of a child in a nine-months' school. Not only are the rural schools of the county handicapped by lack of physical facilities and instructional materials, but the patrons of the county schools impose a further hardship upon their children by limiting the elementary school period to 64 months. Children from county schools entering the Bloomington high school must compete with Bloomington children who have had 72 months of instruction. There is no logical reason why the county schools can not have a nine-months' term. The time-old argument of lack of financial ability is fast disappearing—furthermore, it should never have been introduced to serve as an excuse and a license for failure to provide equality of educational opportunity.

TABLE XCII. COMPARISON OF THE ACHIEVEMENT MEDIANS OF PUPILS IN MONROE COUNTY AND THE CITY OF BLOOMINGTON

Test	County Median: Grade 4	Bloomington Median		County Median: Grade 5	Bloomington Median		County Median: Grade 6	Bloomington Median		County Median: Grade 7	Bloomington Median	
		4A	4B		5A	5B		6A	6B		7A	7B
Paragraph Meaning	10-3	11-4	10-9	11-0	11-11	11-9	11-10	12-11	12-7	12-11	....	12-10
Sentence Meaning	10-3	10-10	10-5	10-11	11-7	11-5	11-4	12-4	12-1	12-3	....	12-6
Word Meaning	10-7	11-0	10-9	11-2	11-5	11-2	11-6	12-1	11-8	12-2	....	12-2
Reading	10-4	11-0	10-8	10-11	11-8	11-5	11-7	12-5	11-0	12-4	....	12-4
Arithmetic Computation	10-7	11-2	10-6	11-5	11-8	11-6	11-11	12-8	12-4	12-11	....	14-2
Arithmetic Reasoning	10-5	11-3	10-6	11-5	11-9	11-4	12-1	12-6	12-5	13-1	....	13-0
Arithmetic	10-7	11-3	10-7	11-5	11-8	11-5	11-11	12-8	12-5	13-1	....	13-5
Language Usage	10-4	11-1	10-6	11-2	11-11	11-9	11-9	13-1	13-0	13-4	....	12-6
Total	10-4	11-0	10-6	11-1	11-8	11-5	11-9	12-8	12-3	12-9	....	12-11
Standard	10-6	10-6	9-10	11-4	11-4	10-11	12-4	12-4	11-10	13-3	13-3	12-8

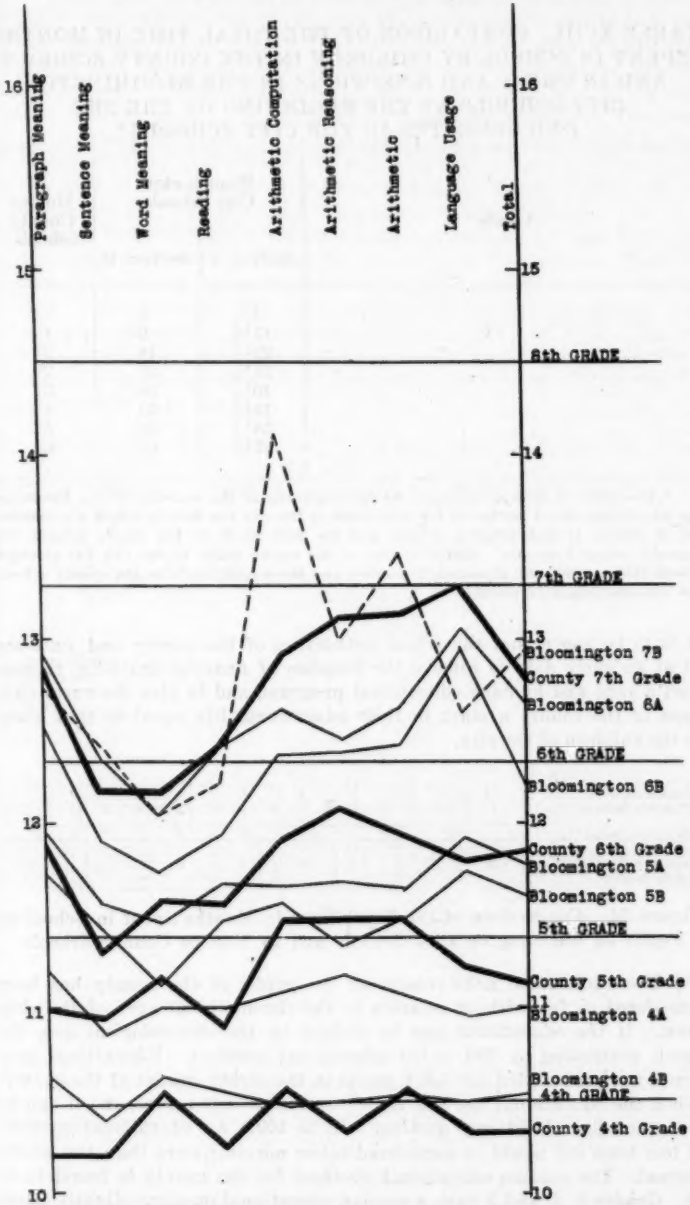


Figure 33. Comparison of the Achievement of Pupils in Monroe County and the City of Bloomington.

TABLE XCIII. COMPARISON OF THE TOTAL TIME IN MONTHS SPENT IN SCHOOL BY CHILDREN IN THE COUNTY SCHOOLS AND IN THE *A* AND *B* SECTIONS IN THE BLOOMINGTON CITY SCHOOLS AT THE BEGINNING OF THE SECOND SEMESTER IN THE CITY SCHOOLS *

Grade	Bloomington City Schools		Monroe County Schools
	Section A	Section B	
1	4½	0	5
2	13½	9	13
3	22½	18	21
4	31½	27	29
5	40½	36	37
6	49½	45	45
7	58½	54	53
8	67½	63	61

* This table is read as follows: At the beginning of the semester of the Bloomington city schools the *A* section of the first grade in the city has been in school 4½ months, the *B* section is just entering school, and the first grade in the county schools has attended school 5 months. The *A* section of the second grade in the city has attended school 13½ months, the *B* section 9 months, and the second grade in the county schools has attended school 13 months.

It is to be hoped that the school authorities of the county and state see fit at an early date to remove the bugaboo of financial inability, to support a sane and humane educational program, and to give the rural children of the county a start in their educational life equal to that given to the children of the city.

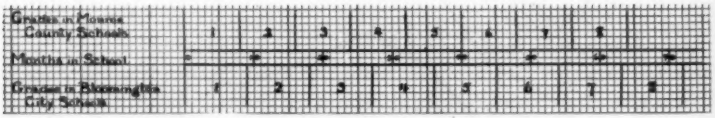

Grades in Monroe County Schools
1 2 3 4 5 6 7 8
Months in School
0 9 13½ 18 22½ 27 31½ 36 40½ 45 49½ 54 58½ 63 67½
Grades in Bloomington City Schools
1 2 3 4 5 6 7 8

Figure 34. Comparison of the Total Time in Months Spent in School by Pupils in Bloomington City Schools and in Monroe County Schools.

The educational achievement of the pupils of the county has been considered so far without relation to the chronological ages of the children. If the educational age be divided by the chronological age, the result multiplied by 100 is the educational quotient. Educational quotients were calculated for 3,391 pupils in the eighth grades of the county. When the educational age and the chronological age correspond it can be seen that the educational quotient will be 100. An educational quotient of less than 100 would be considered below normal; more than 100, above normal. The median educational quotient for the county is found to be 98. Grades 3, 4, and 5 have a median educational quotient slightly above normal; 102, 103, and 101 respectively. Grades 2, 6, 7, and 8 have one

slightly below normal, 98, 97, 99, and 98 respectively; and Grade 1 has a very low educational quotient, 78. The educational ages for the first 3 grades were calculated from the scores made on the Haggerty Reading Examination. It will be remembered, also, that 69 per cent of the first grade children were below normal in reading achievement. Therefore the educational quotients of the first grade would be expected to be low.

An arbitrary classification of educational quotients was set up to correspond to the classification groups used elsewhere in this report. (Chapters VIII, IX, and XI.) Educational quotients above 130 were considered extremely above normal; quotients between 111 and 130, moderately above normal; quotients between 91 and 110, normal; quotients between 71 and 90, moderately below normal; quotients below 71, extremely below normal. With such classification the number and per cent of pupils in each group is presented in Tables XCIV and XCV. The per cent of pupils who are above normal or normal in educational quotients in each grade corresponds roughly with the nearness to normal achievement made by each grade.

TABLE XCIV. NUMBER OF PUPILS IN EACH GRADE IN MONROE COUNTY WHO HAVE ABOVE NORMAL, NORMAL, AND BELOW NORMAL EDUCATIONAL QUOTIENTS

Group	Grade								Total
	1	2	3	4	5	6	7	8	
Extremely above	5	25	29	18	14	13	12	9	125
Moderately above	29	116	114	110	100	89	80	95	733
Normal	90	167	151	224	219	198	179	145	1,373
Moderately below	180	91	95	69	85	130	110	101	861
Extremely below	130	87	29	20	13	8	5	7	299
All Groups	434	486	418	441	431	438	386	357	3,391

TABLE XCV. PER CENT OF PUPILS IN EACH GRADE IN MONROE COUNTY WHO HAVE ABOVE NORMAL, NORMAL, AND BELOW NORMAL EDUCATIONAL QUOTIENTS

Group	Grade								Total
	1	2	3	4	5	6	7	8	
Extremely above	1.2	5.1	7.0	4.1	3.3	3.0	3.1	2.5	3.7
Moderately above	6.7	23.9	27.2	25.0	23.2	20.3	20.7	26.6	21.6
Normal	20.7	34.4	36.1	50.7	50.8	45.2	46.4	40.6	40.5
Moderately below	41.5	18.7	22.7	15.6	19.7	29.7	28.5	28.3	25.4
Extremely below	29.9	17.9	7.0	4.6	3.0	1.8	1.3	2.0	8.8
All Groups	12.8	14.3	12.3	13.0	12.7	12.9	11.5	10.5	100.0

TABLE XCVI. NUMBER OF PUPILS IN EACH TOWNSHIP IN MONROE COUNTY WHO HAVE ABOVE NORMAL, NORMAL, AND BELOW NORMAL EDUCATIONAL QUOTIENTS

Group	Bean Blossom	Benton	Bloomington	Clear Creek	Indian Creek	Marion	Perry	Polk	Richland	Salt Creek	Van Buren	Washington	County
Extremely above (over 130)	10	7	15	12	8	0	48	0	5	2	12	6	125
Moderately above (111-130)	59	39	110	89	31	5	180	6	101	18	72	23	733
Normal (91-110)	97	91	210	163	59	12	302	51	152	60	109	67	1,373
Moderately below (71-90)	97	61	110	66	57	7	180	72	87	49	43	32	861
Extremely below (below 71)	29	19	32	28	11	0	62	49	21	23	14	11	299
All Groups	292	217	477	358	166	24	772	178	366	152	250	139	3,391

TABLE XCVII. PER CENT OF PUPILS IN EACH TOWNSHIP IN MONROE COUNTY WHO HAVE ABOVE NORMAL, NORMAL, AND BELOW NORMAL EDUCATIONAL QUOTIENTS

Group	Bean Blossom	Benton	Bloomington	Clear Creek	Indian Creek	Marion	Perry	Polk	Richland	Salt Creek	Van Buren	Washington	County
Extremely Above (over 130)	3.4	3.2	3.1	3.4	4.8	0.0	6.2	0.0	1.4	1.3	4.8	4.3	3.7
Moderately above (111-130)	20.2	18.0	23.0	24.9	18.7	20.8	23.3	3.4	27.6	11.8	28.8	16.5	21.6
Normal (91-110)	33.2	41.9	44.0	45.5	35.5	50.0	39.1	28.7	41.5	39.5	43.6	48.2	40.5
Moderately below (71-90)	33.2	28.1	23.0	18.4	34.3	29.2	23.3	40.4	23.8	32.2	17.2	23.0	25.4
Extremely below (below 71)	10.0	8.8	6.9	7.8	6.7	0.0	8.1	27.5	5.7	15.2	5.6	8.0	8.8
All Groups	8.6	6.4	14.1	10.6	4.9	0.7	22.8	5.2	10.8	4.5	7.4	4.0	100.0

The fourth and fifth grades, which were most nearly normal in achievement, have the highest per cent of above normal and normal educational quotients, 79.8 and 77.3 per cent respectively. The first grade, with the lowest achievement, had only 28.6 per cent of the pupils above normal or normal in educational quotient. Tables XCVI and XCVII

show the number and per cent of pupils in each township in each educational quotient group classification. Again the comparison of these tables with the educational profiles of the various townships shows the same correspondence and indicates that chronological overageness has served to emphasize the below-normalness of the children of the county. Both the achievement and the educational quotients of the county could be improved by attention to the problem of chronological overageness.

A measure of the efficiency of instruction for the children of the county may be secured by comparing the achievement shown on test results with the intelligence; that is, by dividing the educational age by the mental age. It can be seen that if the two ages are the same the child is achieving what can reasonably be expected of him under normal conditions. If the quotient of the division be multiplied by 100 the result is called the accomplishment ratio (A.R.), and in the case cited would be 100. If, however, the educational age is less than the mental age, the child is not achieving up to his mental ability and the accomplishment ratio would fall below 100. Such a condition would indicate that the teacher may not be stimulating the pupils to accomplish that which their mental ability shows them capable of accomplishing. When the educational age is greater than the mental age, the child is being stimulated to achieve results greater than could reasonably be expected of him and the accomplishment ratio would exceed 100. Such a condition would indicate that the teacher is to be congratulated upon her ability to get children to do their best in school work.

Tables XCVIII and XCIX show the number and per cent of pupils in each grade who have accomplishment ratios which are above normal, normal, and below normal. The limits of the classification groups are the same as those used for intelligence quotients in Chapter IX and educational quotients in this chapter. From Table XCIX it can be seen that about 10.5 per cent of the pupils are below normal in accomplishment ratio. The third grade has the greatest per cent below normal—15.6 per cent. The per cents for the other grades are: fourth grade, 8.1 per cent; fifth grade, 12.2 per cent; sixth grade, 8.5 per cent; seventh

TABLE XCVIII. NUMBER OF PUPILS IN GRADES 3 TO 8 IN MONROE COUNTY WHO HAVE ABOVE NORMAL, NORMAL, AND BELOW NORMAL ACCOMPLISHMENT RATIOS

Group	Grade						Total
	3	4	5	6	7	8	
Extremely above (over 130)	11	3	3	2	5	1	25
Moderately above (111-130)	81	69	53	46	36	31	316
Normal (91-110)	183	313	317	346	305	272	1,736
Moderately below (71-90)	49	33	51	36	39	31	239
Extremely below (below 71)	2	1	1	1	0	0	5
All Groups	326	419	425	431	385	335	2,321

TABLE XCIX. PER CENT OF PUPILS IN GRADES 3 TO 8 IN MONROE COUNTY WHO HAVE ABOVE NORMAL, NORMAL, AND BELOW NORMAL ACCOMPLISHMENT RATIOS

Group	Grade						Total
	3	4	5	6	7	8	
Extremely above (over 130)	3.4	.7	.7	.5	1.3	.3	1.1
Moderately above (111-130)	24.9	16.5	12.5	10.7	9.4	9.2	13.6
Normal (91-110)	56.1	74.7	74.6	80.3	79.2	81.3	74.8
Moderately below (71-90)	15.0	7.9	12.0	8.3	10.1	9.2	10.3
Extremely below (below 71)	.6	.2	.2	.2	0.0	0.0	.2
All Groups	14.0	18.1	18.3	18.6	16.6	14.4	100.0

grade, 10.1 per cent; and the eighth grade, 9.2 per cent. No standards are available for comparison purposes. However, it is clear that the achievement records for the county could be improved if efforts were made by teachers to improve the achievement of those 244 pupils in Grades 3 to 8 in the county who are not working up to their ability and who, therefore, have below-normal accomplishment ratios.

The distributions of accomplishment ratios by townships presented in Tables C and CI show that the per cent of children who are below normal in accomplishment ratio in Bean Blossom, Bloomington, Richland, and Van Buren townships is greater than the average per cent for the county.

TABLE C. NUMBER OF PUPILS IN EACH TOWNSHIP IN MONROE COUNTY WHO HAVE ABOVE NORMAL, NORMAL, AND BELOW NORMAL ACCOMPLISHMENT RATIOS

Group	Bean Blossom	Benton	Bloomington	Clear Creek	Indian Creek	Marion	Perry	Polk	Richland	Salt Creek	Van Buren	Washington	County
Extremely above (over 130)	4	1	4	0	0	0	6	0	1	0	6	3	25
Moderately above (111-130)	22	23	32	17	7	1	90	19	33	28	27	17	316
Normal (91-110)	146	131	239	199	97	12	403	59	175	66	134	75	1,736
Moderately below (71-90)	31	11	39	18	13	1	33	7	42	10	25	9	239
Extremely below (below 71)	1	0	1	0	0	0	1	1	0	0	1	0	5
All Groups	204	166	315	234	117	14	533	86	251	104	193	104	2,321

TABLE CI. PER CENT OF PUPILS IN EACH TOWNSHIP IN MONROE COUNTY WHO HAVE ABOVE NORMAL, NORMAL, AND BELOW NORMAL ACCOMPLISHMENT RATIOS

Group	Bean Blossom	Benton	Bloomington	Clear Creek	Indian Creek	Marion	Perry	Polk	Richland	Salt Creek	Van Buren	Washington	County
Extremely above (over 130).	2.0	0.6	1.3	0.0	0.0	0.0	1.1	0.0	0.4	0.0	3.1	2.9	1.1
Moderately above (111-130)..	10.8	13.9	10.2	7.3	6.0	7.1	16.9	22.1	13.1	26.9	14.0	16.3	13.6
Normal (91-110)...	71.6	78.9	75.9	85.0	82.9	85.8	75.6	68.6	69.8	63.5	69.4	72.1	74.8
Moderately below (71-90)....	15.2	6.6	12.4	7.7	11.1	7.1	6.2	8.1	16.7	9.6	13.0	8.7	10.3
Extremely below (below 71).	0.4	0.0	0.2	0.0	0.0	0.0	0.2	1.2	0.0	0.0	0.5	0.0	0.2
All Groups	8.8	7.2	13.6	10.1	5.0	.5	23.0	3.7	10.8	4.5	8.3	4.5	100.0

Figure 35 shows the per cent of pupils who are normal and extremely and moderately above and below normal in intelligence quotient, educational quotient, and accomplishment ratio.

In addition to the measurement of achievement on the basis of standardized achievement tests given in the testing program, a further measure of achievement was found available. Late in December of 1933 the Indiana New-Type Test was given to the school children of the county as a partial basis for promotion. Results on the Indiana New-Type Test are not directly comparable to those on the Stanford Achievement Test, for the former is based specifically upon the Indiana course of study

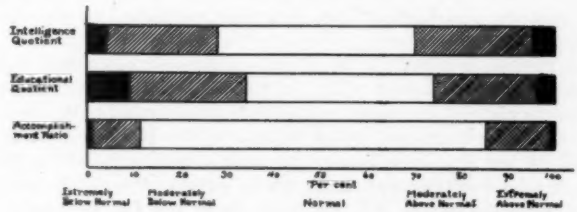


Figure 35. Per Cent of Pupils Having Intelligence Quotients, Educational Quotients, and Accomplishment Ratios Which are Normal and Extremely and Moderately above and below Normal in Monroe County.

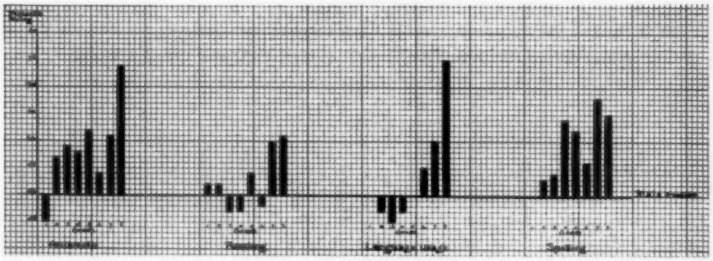


Figure 36. County Medians in Arithmetic, Reading, Language Usage, and Spelling in Monroe County Compared with State Medians on the Indiana New-Type Test in Terms of Percentile Ratings.

while the latter is based upon fundamental subject skills. Much of the Indiana test has to do with specific knowledge involved in subject units prescribed by the state course of study, and hence the results depend upon memory of details rather than upon skill in achievement.

Furthermore, the Indiana New-Type tests were given by the teachers of the county under a variety of conditions, while the Stanford tests were given by trained and experienced people under as nearly uniform conditions as it was possible to provide.

Table CII presents the median scores made in the county and in the state on the Indiana achievement test in each subject and in each grade. The most outstanding discovery made in this comparison is that in spelling the median for the children of the county is higher than the median for the state. (Figure 36.) County-wide emphasis upon annual spelling contests for several years past is perhaps the cause for this superior achievement in spelling. Only slightly less outstanding is the record of the county pupils in arithmetic. (Figure 36.) In all grades except the first the medians for the county are higher than those for the state. In reading in the first, second, fifth, seventh, and eighth grades (Figure 36), the median for the children of the county is higher than the median for the state, a finding which does not correspond with the results in reading for those grades on the Stanford Achievement Test. In language the county medians are higher than the state medians in only the sixth, seventh, and eighth grades. (Figure 36.)

The records attained by the various grades as compared with state medians do not correspond with the records attained on the Stanford Achievement tests as compared with grade standards for the tests. The seventh and eighth grades, which were considerably below standard as indicated by the profile in Figure 26, were found to be above the state median in all subjects except eighth grade history where state and county medians were the same. On the other hand the fourth grade, which, according to Figure 26, was the only grade to approach normal achievement on the Stanford Achievement tests, surpassed the state medians on the Indiana New-Type Test only in arithmetic, physiology, and spelling.

In Table CII the medians are given in terms of scores. A more

TABLE CII. COMPARISON OF MEDIAN SCORES ON THE INDIANA NEW-TYPE TEST IN MONROE COUNTY AND IN THE STATE AS A WHOLE, SEMESTER I, 1933-34 *

Grade	Arithmetic		Reading		Language		Geography		Physiology		History		General Science		Spelling	
	County	State	County	State	County	State	County	State	County	State	County	State	County	State	County	State
1.....	61	64	45	44	..	..	..	..	..	..	..	..	..	..	..	..
2.....	85	82	61	60	30	31	..	..	..	..	..	..	..	..	35	34
3.....	26	23	42	44	41	43	..	..	..	..	..	..	..	..	38	38
4.....	18	16	43	45	46	47	26	27	20	19	..	..	..	..	43	41
5.....	12	10	40	38	53	53	25	27	23	23	20	21	..	..	42	40
6.....	11	10	42	43	50	48	34	34	22	23	29	31	..	..	42	42
7.....	13	12	32	29	44	40	42	38	32	30	29	27	..	..	40	36
8.....	11	7	37	34	57	49	..	..	..	..	30	30	35	34	42	40

* This table is read as follows: In first grade arithmetic on the Indiana New-Type Test the medium score for Monroe County was 61 as compared with a median score of 64 for the state. In first grade reading the median score for Monroe County was 45 as compared with a median score of 44 for the state.

TABLE CIII. PERCENTILE RATINGS OF MONROE COUNTY MEDIANS IN TERMS OF STATE PERCENTILES ON THE INDIANA NEW-TYPE TEST, SEMESTER I, 1933-34 *

Grade	Arithmetic	Reading	Language	Geography	Physiology	History	General Science	Spelling
1	45	52	..	..	..	..	..	..
2	56	52	47	..	..	..	..	53
3	58	47	45	..	..	..	..	54
4	57	47	47	48	53	..	..	64
5	61	54	50	42	50	46	..	62
6	54	48	55	50	48	45	..	56
7	60	60	61	62	58	58	..	68
8	74	61	76	..	..	50	54	65

* This table is read as follows: In first grade arithmetic the median score for Monroe County falls in the 45th state percentile ranking; or 55 per cent of the pupils in the first grade in the state made a better score in arithmetic than 50 per cent of the Monroe County pupils.

adequate picture of the differences between county medians and state medians can be secured by converting the county median scores to percentiles on the basis of the state score distributions. Table CIII shows the county medians in terms of percentiles based on the state score distributions in which the median state score has a percentile of 50.

Table CIV shows the median state and county scores on the Indiana New-Type Test at the end of Semester I, 1934-35. Comparisons can be made with the medians in Table CII to show the achievement gains and losses during the year.

The Indiana New-Type Test is a limited time test and is given by the teachers in each class and school. It is very likely, therefore, that strict uniformity in administering the test is not secured. One of the prime requisites, if test results are to be compared, is that the conditions under which the tests are given be uniform. Since the Indiana New-Type Test is used throughout the state for comparative purposes, very careful instructions for giving the test should accompany it and teachers should be very careful to follow rigidly the instructions given.

TABLE CIV. COMPARISON OF MEDIAN SCORES ON THE INDIANA NEW-TYPE TEST IN MONROE COUNTY AS COMPARED WITH STATE MEDIANS, SEMESTER I, 1934-35 *

Grade	Arithmetic		Reading		Language		Geography		Physiology		History		General Science		Spelling	
	County	State	County	State	County	State	County	State	County	State	County	State	County	State	County	State
1.....	58	69	47	49	..	..	..	..	..	..	..	..	..	..	..	..
2.....	76	79	59	59	34	31	..	..	..	..	..	..	..	..	38	36
3.....	24	27	46	51	40	44	..	..	..	..	..	..	..	..	37	39
4.....	19	22	37	41	41	45	28	29	21	25	..	..	..	..	40	41
5.....	14	15	39	37	52	53	30	38	30	31	25	29	..	..	44	44
6.....	18	19	37	37	49	48	31	35	25	29	30	33	..	..	41	39
7.....	18	15	29	27	46	43	36	35	28	28	26	27	..	..	38	35
8.....	12	9	31	29	53	44	..	..	..	..	30	28	26	27	42	35

* Schools not included: Finley; Leonard; Sanders, Grades 5 to 8. Test papers from these schools were not turned in at the office of the county superintendent at the time when the tabulations were made.

CHAPTER XIII
ADJUSTMENT OF THE SCHOOL TO PUPIL NEEDS

WHEN a pupil is extremely overage for his grade, when he is exceptionally high in achievement as compared with the others in his grade group, when he does not conform to the established concepts of behavior in the schoolroom, or when for any other reason he is at an appreciable variance from what is designated as normal, it has been customary to call that pupil a "problem" case. This practice tends to place the blame for variance from normal on the child and to relieve the school of any responsibility for adjusting its program to his needs. Variance from normal on the part of a child demands an adjustment on the part of the school to the end that the needs of the child may be satisfactorily served. A part of this adjustment on the part of the school involves the training of the child so that he may make the satisfactory adjustments to his environment. This chapter deals with those children in the elementary schools of the county whose needs demand special adjustment in the activity of the school.

In an earlier chapter is described the technique used in this survey to locate those pupils who were found to be extremely overage or extremely underage chronologically, educationally, and mentally. Table CV shows the distribution, on the basis of grade placement, of the 696 cases found to be out-of-line by the testing program. In order to understand more completely the data presented, a detailed analysis of the chronological, educational, and mental ages of specific pupils was made and is presented in Table CVI. It will be noted that the first and second grades contribute almost one-third of the total number of cases. Also it will be remembered that the first and second grade children were not given the intelligence test. Therefore the cases in these 2 grades are selected on the basis of chronological and educational age. Extreme chronological overageness accounts for a total of 131 of the 315 cases in the 2 grades, while extreme educational underageness accounts for 165 of the 315 cases.

The character of the combination of chronological, educational, and mental ages presented in Table CVI indicates to some degree the task of adjustment confronting the schools. For example, since 152 of the 696 out-of-line cases have a normal chronological age but are below normal in educational age, it is evident that progress through the grades has been normal for this group of children but their achievement in school subjects has fallen below normal. The task of the school, so far as this group is concerned, is to improve the methods of instruction in order to remove the deficiency in achievement.

Again 102 of the 696 out-of-line cases are normal in chronological age but are above normal in educational age. This group presents to the school an entirely different problem. One of two solutions may be made. Each pupil may be advanced above the grade for which his age is normal or he may be retained in that grade and given supplementary

or enrichment activities. What should be done will necessarily be conditioned by the specific environment of the child and school.

A third group of 71 pupils normal in chronological and educational age but above normal in mental age presents an altogether different problem to the school. Pupils in this group are not working up to their mental ability. They could and should perform on a much higher educational level.

Other similar groups requiring special and specific attention are easily located by the use of Table CVI.

The school may be poorly adjusted to the child in other ways than with respect to the age of the child. Some problems of discipline result from poor adjustment of the school to the child. The economic and social status of the child may not be considered by the school and hence poor adjustment results. Other like factors are influential in preventing the proper coördination and coöperation between child and school. In many cases teachers are aware of such factors, in other cases teachers are par-

TABLE CV. CHRONOLOGICAL, EDUCATIONAL, AND MENTAL OUT-OF-LINENESS OF 696 MONROE COUNTY CHILDREN, DISCOVERED BY THE TESTING PROGRAM, AND DISTRIBUTED ON THE BASIS OF GRADES *

Group	Grade								Total
	1	2	3	4	5	6	7	8	
Chronological Age—									
Above normal	51	80	54	69	38	22	2	4	320
Normal	49	124	59	25	33	33	19	17	359
Below normal	4	7	3	2	0	0	0	1	17
Total	104	211	116	96	71	55	21	22	696
Educational Age—									
Above normal	10	53	15	10	5	10	9	5	117
Normal	16	33	69	64	50	39	9	11	291
Below normal	54	111	23	5	2	5	2	4	206
No data	24	14	9	17	14	1	1	2	82
Total	104	211	116	96	71	55	21	22	696
Mental Age—									
Above normal	0	0	22	20	26	12	6	10	96
Normal	4	9	24	38	15	19	8	5	122
Below normal	1	4	12	4	8	17	5	4	55
No data	99	198	58	34	22	7	2	3	423
Total	104	211	116	96	71	55	21	22	696

* This table is read as follows: Of the 104 out-of-line cases in the first grade discovered by the testing program 51 were above normal in chronological age, 49 were normal, and 4 were below normal; of the same group 10 were above normal in educational age, 16 were normal, 54 were below normal, and for 24 no educational age was secured; etc.

TABLE CVI. GRADE DISTRIBUTION AND ANALYSIS OF 696 OUT-OF-LINE CHILDREN IN MONROE COUNTY ON THE BASIS OF COMBINATIONS OF CHRONOLOGICAL, EDUCATIONAL, AND MENTAL AGES *

Combination			Grade								Total
CA	EA	MA	1	2	3	4	5	6	7	8	
Above	Above	No data	3	8	2	..	..	..	..	..	13
Above	Below	No data	8	25	2	3	1	..	..	..	39
Above	No data	Above	..	..	..	..	1	..	..	..	1
Above	Normal	Normal	2	4	14	33	13	12	1	2	81
Above	Normal	No data	13	25	27	14	6	5	..	1	91
Above	No data	No data	24	14	8	15	13	1	1	1	77
Above	Below	Normal	..	..	..	..	..	1	..	..	1
Above	Normal	Below	1	4	1	2	2	3	..	..	13
Above	No data	Normal	..	..	..	1	..	..	..	..	1
Above	Normal	Above	..	..	..	..	1	..	..	..	1
Above	Above	Normal	..	..	..	1	1	..	..	..	2
Normal	Above	No data	7	44	4	..	1	1	1	1	59
Normal	Above	Above	..	..	5	6	2	3	2	3	21
Normal	Below	Below	..	..	2	..	..	4	1	3	10
Normal	Below	No data	40	75	13	..	1	..	..	..	129
Normal	Above	Normal	..	1	4	3	1	6	6	1	22
Normal	Below	Normal	2	4	5	..	..	..	1	1	13
Normal	Normal	Above	..	..	16	13	22	9	4	7	71
Normal	Normal	Below	..	..	9	2	6	10	4	1	32
Normal	No data	Above	..	..	1	1	..	..	..	..	2
Below	Below	No data	4	7	1	2	..	..	..	..	14
Below	No data	Normal	..	..	..	..	..	..	..	1	1
Below	Normal	Normal	..	..	1	..	..	..	..	..	1
Below	Normal	No data	..	..	1	..	..	..	..	..	1
Total..	.....	.....	104	211	116	96	71	55	21	22	696

* This table is read as follows: Of the 696 out-of-line cases discovered by the testing program 13 had a chronological age above normal, an educational age above normal, and no mental age secured—the 13 cases were distributed among the grades as follows: 3 in the first grade, 8 in the second grade, and 2 in the third grade.

ticularly insensible to the causes of child difficulties and are therefore incapable of making the activities of the school fit the needs of the child. Many times severe injustices are inflicted upon children because teachers, through lack of objective data, do not recognize the failure of the school to assist the child in solving his difficulties. Therefore in order to locate those children who present problems to the school but who were not revealed by the testing data the following letter was sent to each elementary teacher.

Bloomington, Indiana,
February 21, 1934.

UNADJUSTED-PUPIL BLANK

In the survey of the public schools of Monroe County, conducted by the CWA, we are in need of some additional information in order to complete the survey.

There is certain information about a pupil that does not show in the tests and the only way of obtaining this is through the teacher.

Please list on the enclosed form the problem or unadjusted pupils in your room or school, according to the following classification.

1. Those in a higher grade than they should be for their chronological age by at least one year. List these under *Advanced Group.*
2. Those in a lower grade than they should be for their chronological age by at least one year. List these under *Retarded Group.*
3. Those who are disciplinary problems or cases, i.e., pupils who are mischievous, inattentive, backward, nervous, quick-tempered, truant, etc. List these under *Disciplinary Problem Group.*
4. Those who are retarded on account of physical defects, illness of the pupil, or illness in family, poverty conditions at home (such as lack of clothing to attend school, or lack of school books or other essentials), lack of coöperation on the part of the parent (such as failing to start the child to school until overage, or loading him down with home work). List these under *Miscellaneous or General Group.*

This information is strictly confidential and will be used only in connection with this survey and to assist the pupil to effect a better adjustment to school work. We shall greatly appreciate it if you will return this blank at your earliest convenience.

Yours very truly,

_____

Superintendent of Monroe
County Schools.

A sheet for each of these four classifications, with the explanation of the classification and blank lines for the listing of the names of the pupils, was sent with each letter.

On these blanks teachers listed 1,476 children, approximately 37 per cent of the total elementary enrollment of the county. These 1,476 children were distributed in the 4 classifications on the Unadjusted-Pupil Blanks as follows: advanced group, 182; retarded group, 821; disciplinary group, 239; and miscellaneous group, 234. Some children were included in 2 or more groups. The number of pupils listed in each group including duplications are as follows: advanced group, 211; retarded group, 893; disciplinary group, 258; and miscellaneous group, 264.

TABLE CVII. REASONS GIVEN BY TEACHERS FOR PUPILS IN MONROE COUNTY BEING IN A HIGHER GRADE THAN THEY SHOULD BE FOR THEIR CHRONOLOGICAL AGE

Reason	Grade								Total
	1	2	3	4	5	6	7	8	
A. Students satisfactorily advanced—									
Started early	2	3	1	6	1	3	2	4	22
Good student	..	2	6	1	3	6	4	2	24
Double promotion	..	1	..	2	..	4	5	2	14
Exceptional ability	1	..	1	3	..	1	6	2	14
Attended summer school	..	..	..	..	..	..	..	1	1
Inherited	..	..	..	..	1	..	..	..	1
Sub-Total	3	6	8	12	5	14	17	11	76
B. Students unsatisfactorily advanced—									
Promoted too fast	..	..	1	2	..	2	..	2	7
Started too soon	2	1	..	..	..	1	..	..	4
Slow thinker	..	2	..	..	1	..	..	..	3
Has difficulty	..	..	2	..	..	1	..	..	3
Too young mentally	1	..	..	..	..	..	1	..	2
Loses too much sleep	..	..	..	..	..	..	1	..	1
Restless—not uniform	..	..	..	..	1	..	..	..	1
Should not be in group	..	..	..	1	..	..	..	..	1
Plays	..	1	..	..	..	..	..	..	1
Sub-Total	3	4	3	3	2	4	2	2	23
C. Students advanced—whether adjusted or unadjusted unknown—judgment of teachers inadequate or lacking—									
Problem not indicated	1	2	12	10	10	14	13	40	102
Teacher does not know reason	..	2	..	..	..	2	..	1	5
Reason given inadequate	..	2	..	..	..	1	..	1	4
Transient	..	1	..	..	..	..	..	..	1
Sub-Total	1	7	12	10	10	17	13	42	112
Grand Total	7	17	23	25	17	35	32	55	211

Teachers were requested to indicate the nature of the problem involved for each child in the advanced group. These responses were tabulated under three different classifications and are presented in Table CVII. It is significant that the teachers gave no description of the nature of the problem for 102 of the 211 cases listed. Perhaps some teachers were not careful enough in filling out the blanks and for that reason the nature of the problem was not indicated for a large per cent of the cases. But there is a strong suggestion that teachers were not acquainted with the pupils listed to a degree that the nature of the prob-

lem could be given. In 5 cases teachers were frank enough to state that they did not know the reason for the advanced standing of the pupils. When it is remembered that the information on the Unadjusted-Pupil

TABLE CVIII. REASONS GIVEN BY TEACHERS FOR PUPILS IN MONROE COUNTY BEING IN A LOWER GRADE THAN THEY SHOULD BE FOR THEIR CHRONOLOGICAL AGE

Reason	Grade								Total
	1	2	3	4	5	6	7	8	
Reason not given	14	13	14	17	16	14	7	15	110
Mentally deficient	13	15	13	20	10	7	13	10	101
Slow	7	14	10	7	17	19	14	10	98
Failure	8	9	14	7	13	12	13	8	84
Entered late	13	12	9	4	13	12	8	5	76
Illness	5	5	3	7	6	5	14	14	59
Absent from school	5	4	12	10	8	6	4	3	52
Transients	2	3	6	8	6	6	7	9	47
Physical defects	6	8	6	4	3	8	1	3	39
Poverty	9	4	2	2	1	5	3	3	29
Environment	4	3	4	7	1	7	..	1	27
Inattentive	8	2	2	5	2	3	1	2	25
Uninterested	1	2	1	3	5	7	2	4	25
Poor health	5	3	1	3	3	2	..	..	17
Improper home conditions	..	3	1	..	3	5	1	3	16
Lack of cooperation	..	4	2	..	1	3	1	1	12
Backwardness	3	3	3	1	..	..	..	1	11
Slow start	2	5	..	1	1	..	1	..	10
Cannot read	..	2	1	1	2	3	..	..	9
Lack of books	..	1	..	2	2	1	..	..	6
Heredity	1	2	..	..	..	1	1	..	5
Reason pointless	1	..	..	..	1	1	..	2	5
Tobacco	..	..	2	2	..	..	1	..	5
Wrong attitude	..	..	..	1	..	..	1	1	3
Work too difficult	..	..	1	..	..	..	..	2	3
Lazy	..	..	..	..	1	..	1	1	3
No good	2	..	..	..	..	..	..	..	2
Poor instruction	..	..	1	1	..	..	..	..	2
Does not work	..	..	..	..	..	1	1	..	2
Home training, stubborn	..	..	..	..	..	..	2	..	2
Careless	..	..	..	..	..	1	..	1	2
Entered early, lost interest	1	..	1	..	..	..	..	..	2
Absent on permit	..	..	..	1	..	..	..	..	1
Truant—lazy—parents non-cooperative	..	..	..	..	..	1	..	..	1
Would not recite	1	..	..	..	..	..	..	..	1
Undernourished	1	..	..	..	..	..	..	..	1
Total	112	117	109	114	115	130	97	99	893

TABLE CIX. REASONS GIVEN BY TEACHERS FOR PUPILS IN MONROE COUNTY BEING DISCIPLINARY CASES

Reason	Grade								Total
	1	2	3	4	5	6	7	8	
Inattentive—mischievous	3	4	9	5	3	7	2	2	35
Inattentive	7	7	4	5	4	1	1	1	30
Nervous	7	5	6	2	4	2	1	1	28
Mischievous	3	4	3	5	5	2	1	3	26
Truancy	..	3	2	5	2	2	5	..	19
Backward	5	..	2	..	1	2	1	3	14
Temper	1	2	2	1	..	3	2	1	12
Mentally deficient	2	3	..	2	1	2	1	..	11
Inattentive—backward	2	1	4	1	..	..	..	..	8
Nervous—mischievous	..	..	1	..	2	2	2	..	7
Inattentive—truancy	1	..	1	2	2	1	..	..	7
Nervous—temper	1	1	2	1	1	..	1	..	7
Temper—mischievous	..	..	2	..	2	1	1	..	6
Nervous—inattentive	3	1	1	1	..	..	..	..	6
Nervous—backward	3	..	1	..	2	..	..	..	6
Defiant—mischievous—inattentive	1	3	..	1	..	..	..	..	5
Lazy	..	..	1	..	..	3	..	..	4
Inattentive—temper	..	..	1	2	..	1	..	..	4
Mischievous—truancy	..	1	..	..	1	1	1	..	4
Poor home training	..	..	1	2	..	..	..	..	3
Quarrelsome	1	..	..	..	..	1	..	1	3
Won't work	3	..	..	..	..	..	..	..	3
Stubborn	1	..	..	..	..	..	1	..	2
Backward—temper	1	..	..	..	..	..	..	..	1
Vulgar	..	..	..	..	..	..	1	..	1
Inattentive—temper—truancy	..	..	..	1	..	..	..	..	1
Mischievous—lazy	..	1	..	..	..	..	..	..	1
Mischievous—timid	..	..	1	..	..	..	..	..	1
No books	..	..	..	1	..	..	..	..	1
Discourteous	..	..	..	..	..	1	..	..	1
No reason given	..	1	..	..	..	..	..	..	1
Total	45	37	44	37	30	32	21	12	258

Blanks was requested after pupils had been under the care of the teacher for almost six months of the school year, it seems that the teacher should be able to account for a large per cent of the pupils in the advanced group. If it is assumed that the teachers do not know the reason for the advanced standing of 50 per cent of the pupils in the group, then it would seem that teachers need to exercise the greatest of care in the selection of instructional methods and in the passing or failing of such pupils. Of the 99 pupils who were in the advanced group and whose

standing was accounted for by teachers, it should be noted that approximately 25 per cent had been unsatisfactorily advanced.

Of the 1,476 children listed by teachers, 893, approximately 60 per cent, were classified in the Retarded Group. Such a large number corresponds roughly with the previously discussed degree of retardation among the pupils in the county. The different reasons for retardation

TABLE CX. MISCELLANEOUS REASONS GIVEN BY TEACHERS FOR THE RETARDATION OF PUPILS IN MONROE COUNTY

Reason	Grade								Total
	1	2	3	4	5	6	7	8	
Illness	3	7	8	1	2	5	6	4	36
Poverty	3	7	8	5	2	3	4	1	33
Entered late	6	10	4	2	..	2	2	2	28
Mentally deficient	6	5	3	4	3	4	2	1	28
Parents non-coöperative	1	7	3	4	3	4	2	1	25
Physical defects	2	1	1	1	1	1	1	4	12
Poor health	1	1	2	4	3	1	..	..	12
Non-coöperation	..	..	..	2	2	2	1	2	9
Truancy—parents non-coöperative	..	..	2	3	1	..	2	..	8
Environment	..	2	..	2	..	2	2	..	8
Homework	..	..	2	2	3	..	..	..	7
Defective speech	1	1	1	..	2	1	..	1	7
Heredity—poverty	..	..	2	3	..	..	..	1	6
Lack of school books	1	..	1	1	1	1	..	..	5
Defective hearing	2	1	..	..	..	2	..	..	5
Lazy	..	1	1	1	..	1	..	..	4
Poverty—low mentally	3	..	..	..	1	..	..	..	4
Defective eyes	..	1	1	..	..	..	1	..	3
Homework — entered late — no books	..	..	1	..	1	..	1	..	3
Nervous	1	..	..	..	..	2	..	..	3
Slow	..	..	..	1	..	2	..	..	3
Advanced for mentality	..	..	1	..	..	1	..	..	2
Lack of clothing	..	..	..	1	..	1	..	..	2
Physical defects	..	..	..	1	..	..	..	1	2
Illness—broken home	..	..	1	..	..	..	..	..	1
Cannot read	..	..	..	..	1	..	..	..	1
Far from school	1	..	..	..	..	..	..	..	1
Transient	..	..	1	..	..	..	..	..	1
Malnutrition	..	..	..	..	..	..	..	1	1
Poor start	..	..	..	..	..	1	..	..	1
Lack of interest	..	..	..	..	..	1	..	..	1
Backward—temper	1	..	..	..	..	..	..	..	1
Moron	..	..	1	..	..	..	..	..	1
Total	32	44	44	38	26	37	24	19	264

TABLE CXI. NUMBER OF OUT-OF-LINE CASES IN EACH GRADE IN MONROE COUNTY

Classification	Grade								Total
	1	2	3	4	5	6	7	8	
Cases discovered by testing program and not by teachers	24	95	39	23	24	19	8	12	244
Cases discovered by teachers and not by testing program	78	99	124	123	127	175	154	144	1,024
Cases discovered by both teachers and testing program	80	116	77	73	47	36	13	10	452
All cases discovered by testing program	104	211	116	96	71	55	21	22	696
All cases discovered by teachers	158	215	201	196	174	211	167	154	1,476
Total Cases Discovered	182	310	240	219	198	230	175	166	1,720

given in Table CVIII are characteristic of teachers' explanations for retardation. It is quite evident that in many cases the reason given is not a cause but a symptom of a cause which remains undetermined. What few causes are found in the list of reasons given were more than likely subjectively determined. Teachers showed a greater willingness to express their explanation for retardation than they did for advanced standing. Of the 893 children listed in the group under consideration only 110 were listed without the reasons for retardation being given.

Table CIX shows the number of pupils listed by teachers as being disciplinary cases. No attempt was made to classify the types of disciplinary problems involved. It may be significant, however, to note that approximately 40 per cent of the cases were listed because the children were inattentive. It is also of some significance to note that the greatest number of disciplinary cases appears in the first grade and that the number decreases as the grade level increases.

A total of 264 pupils were listed in the miscellaneous group. Table CX shows the reasons given by teachers for listing pupils in this group.

Testing data were recorded after the name of each teacher-located case on a specially prepared record form, and this list was checked against the list of 696 test-located cases. The two lists showed agreement on 452 cases. The test-located group contained the names of 244 children not located by teachers, while the teacher-located list contained the names of 1,024 children not discovered through the testing data. Table CXI shows a summary by grades of the 1,720 cases located by the two methods.

A summary of the 244 cases located by the testing data but not recognized by the teachers is given in Table CXII. Approximately 40 per cent of the cases are found in the second grade. Apparently teachers did not recognize extremely high or extremely low achievement in second grade reading since 35 children with normal chronological age made extremely high reading achievement records and 47 children with normal

chronological age made extremely low reading achievement records. Evidently teachers did not recognize children with extremely high mental ability, for they discovered but 18 such children among the 1,476 listed whereas the testing program located 96 such children, 56 of whom, according to Table CXII, were found to have normal chronological and educational ages.

Analysis of the testing data for 182 children listed by the teachers in the advanced group and presented in Table CXIII shows that 153 of the cases were normal in chronological, educational, and mental age. Evidently teachers either did not understand the definition of "advanced group" or they were in serious error as to the actual status of children under their care.

Only slightly better judgment was exercised by teachers in placing children in the "retarded group," for of the 821 children so located, the testing data showed 577 were normal in chronological, educational, and mental age. Table CXIV shows that 155 of the 821 children in this

TABLE CXII. DISTRIBUTION AND ANALYSIS OF THE CHRONOLOGICAL, EDUCATIONAL, AND MENTAL AGE STATUS OF THE 244 OUT-OF-LINE CASES IN MONROE COUNTY WHO WERE DISCOVERED BY THE TESTING PROGRAM BUT NOT RECOGNIZED BY THE TEACHERS*

Combination			Grade								Total
CA	EA	MA	1	2	3	4	5	6	7	8	
Above	Above	No data	2	3	1	..	..	..	..	..	6
Above	Below	No data	1	2	..	..	..	..	..	..	3
Above	No data	Above	..	..	..	..	1	..	..	..	1
Above	Normal	Normal	..	..	1	1	4	3	..	..	9
Above	Normal	No data	2	4	1	..	..	..	..	..	7
Above	No data	No data	3	3	2	1	1	..	..	..	10
Above	Below	Normal	..	..	..	..	..	1	..	..	1
Above	Normal	Below	..	..	..	..	1	..	..	..	1
Normal	Above	No data	5	35	3	..	1	..	..	..	44
Normal	Above	Above	..	..	5	5	2	3	2	2	19
Normal	Below	Below	..	..	..	..	..	1	..	3	4
Normal	Below	No data	11	47	1	..	..	..	..	..	59
Normal	Above	Normal	..	..	4	3	..	3	3	1	14
Normal	Below	Normal	..	..	3	..	..	..	1	..	4
Normal	Normal	Above	..	..	16	12	14	7	2	5	56
Normal	Normal	Below	..	..	1	..	..	1	..	..	2
Normal	No data	Above	..	..	1	1	..	..	..	..	2
Below	Below	No data	..	1	..	..	..	..	..	..	1
Below	No data	Normal	..	..	..	..	..	..	..	1	1
Total			24	95	39	23	24	19	8	12	244

* This table is read as follows: Of the 244 out-of-line cases discovered by the testing program and not recognized by the teachers, 6 had a chronological age extremely above normal, and an educational age extremely above normal. These 6 cases are distributed as follows: 2 in the first grade, 3 in the second grade, and 1 in the third grade.

TABLE CXIII. DISTRIBUTION AND ANALYSIS OF THE CHRONOLOGICAL, EDUCATIONAL, AND MENTAL AGE STATUS OF THE 182 CASES IN MONROE COUNTY LISTED IN THE ADVANCED GROUP BY THE TEACHERS, AS DISCOVERED BY THE TESTING PROGRAM

Combination			Grade								Total
CA	EA	MA	1	2	3	4	5	6	7	8	
Normal	Normal	Normal	2	12	14	22	15	23	26	39	153
Above	Below	No data	..	1	..	..	..	..	..	..	1
Above	Normal	Normal	..	..	1	..	..	..	..	..	1
Above	No data	No data	..	1	..	1	1	1	1	1	6
Above	Above	Normal	..	..	..	1	1	..	..	..	2
Normal	Above	No data	1	2	..	..	..	..	..	..	3
Normal	Above	Above	..	..	..	1	..	..	..	1	2
Normal	Below	No data	2	2	..	..	..	..	..	..	4
Normal	Above	Normal	..	..	..	..	1	1	1	..	3
Normal	Normal	Above	..	..	..	1	..	..	1	1	3
Normal	Normal	Below	..	..	..	..	..	1	1	..	2
Below	Normal	Normal	..	..	1	..	..	..	..	..	1
Below	Normal	No data	..	..	1	..	..	..	..	..	1
Total..	.....	.....	5	18	17	26	18	26	30	42	182

group had extremely high chronological ages, while 12 had extremely low chronological ages.

It was to be expected that the children in the "disciplinary group" would not necessarily be located by testing data. Table CXV shows an analysis of the testing data for the 239 children placed in this group by teachers. It can be seen that 146 of the group were normal in chronological, educational, and mental age. Perhaps it is significant that of the 222 children in this group for whom educational ages were secured, only 5 were extremely above normal and only 34 were extremely below normal; and of the 178 children for whom mental ages were secured, only 4 were extremely above normal and only 20 were extremely below normal. In other words, the disciplinary cases, according to teachers' reports, are found among children normal in chronological, educational, and mental age rather than among children extremely above or below normal in this respect. There seems to be little indication that disciplinary cases are grouped at any particular grade level, for the proportion of such cases in each grade to the total enrollment of each grade is practically constant.

As would be expected from the definition of the "miscellaneous group," the cases listed under this group were found to be either normal or below normal. Table CXVI shows that, of 234 cases for which testing data were available, 148 were found to be normal in chronological, educational, and mental age.

The outstanding conclusion of this part of the study can be clearly seen. Teachers do not recognize lack of adjustment due to extreme levels of achievement or mental ability. The lack of correspondence in the selection of cases in the "retarded group" by teachers and the testing data for those children is sufficient proof. Such a conclusion might have been suspected early in the survey when it was found extremely difficult for the survey staff to secure from any source, including school records, the birth dates of children enrolled in school.

In order to determine the educational age of a child, his composite achievement score was translated into years and months. It was discovered that there existed wide variation in the subject ages for individual pupils whose educational ages were normal. Figure 37 shows some typical variations of this character. A pupil with a reading age of 15 years, an arithmetic age of 9½ years, and a language age of 15 years shows evidence that he has not been served properly by the school. In the same seventh grade room another child with a reading age of 11½ years, an arithmetic age of 14½ years, and a language age of 12½ years, but with a composite educational age only slightly below normal is in serious need of special attention in the program of the school. Such

TABLE CXIV. DISTRIBUTION AND ANALYSIS OF THE CHRONOLOGICAL, EDUCATIONAL, AND MENTAL AGE STATUS OF THE 821 CASES IN MONROE COUNTY LISTED IN THE RETARDED GROUP BY THE TEACHERS, AS DISCOVERED BY THE TESTING PROGRAM

Combination			Grade								Total
CA	EA	MA	1	2	3	4	5	6	7	8	
Normal	Normal	Normal	48	47	66	60	83	102	96	75	577
Above	Above	No data	1	1	..	..	..	..	..	..	2
Above	Below	No data	2	7	..	..	..	..	..	..	9
Above	Normal	Normal	..	..	5	17	6	8	..	1	37
Above	Normal	No data	9	16	18	12	6	4	..	1	66
Above	No data	No data	8	9	2	6	7	..	..	..	32
Above	No data	Normal	..	..	..	1	..	..	..	..	1
Above	Normal	Below	..	3	1	1	1	1	..	..	7
Above	Normal	Above	..	..	..	..	1	..	..	..	1
Normal	Above	No data	1	7	1	..	..	1	1	1	12
Normal	Below	No data	18	19	9	..	..	..	..	..	46
Normal	Above	Normal	..	..	..	..	..	1	..	..	1
Normal	Below	Normal	..	..	1	..	..	..	..	1	2
Normal	Normal	Above	..	..	..	..	6	1	1	..	8
Normal	Normal	Below	..	..	3	1	..	2	1	..	7
Normal	Below	Below	..	..	..	..	..	..	1	..	1
Below	Below	No data	3	6	1	2	..	..	..	..	12
Total	.....	.....	90	115	107	100	110	120	100	79	821

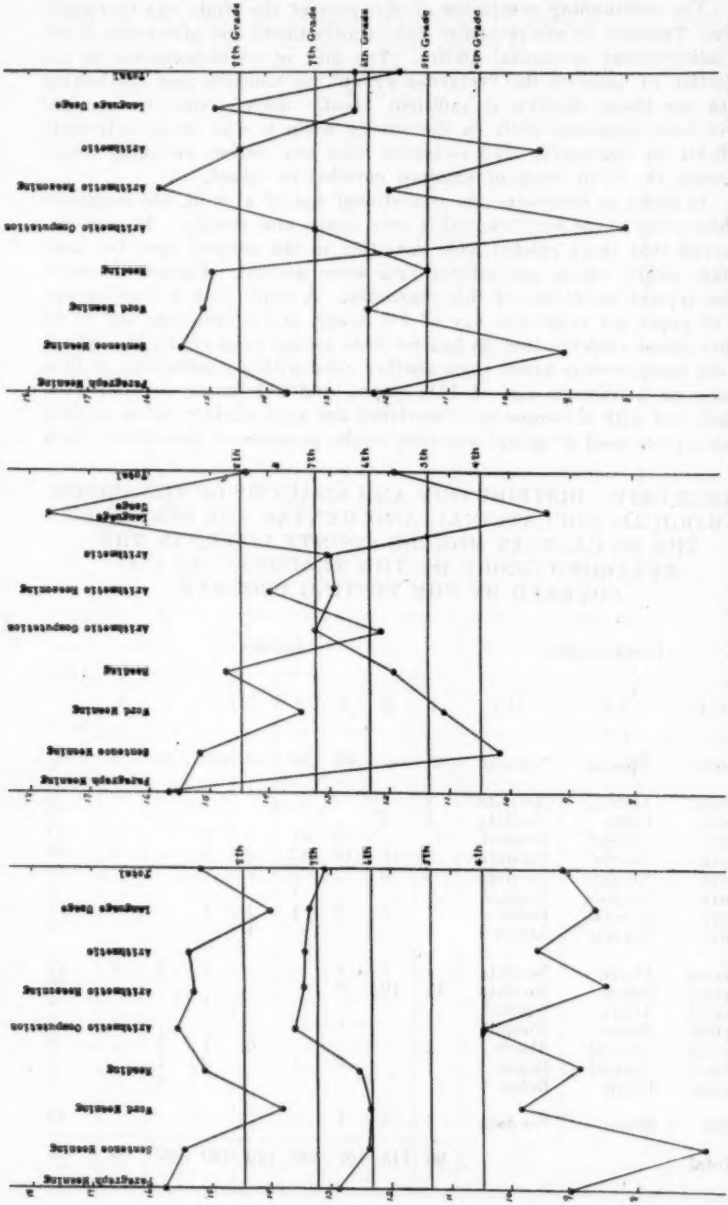


Figure 37. Profiles of Pupils in the Same Seventh Grade Group in Monroe County Who Show Extreme Variation in Subject and Total Achievement.

children just as surely present problems to the school program as do those who show wide variation between chronological, educational, and mental ages.

In order to select the cases showing internal variation in educational achievement to such an extent that they would be considered extreme, the following arbitrary standards were applied to the Stanford Achievement Test records: when the variability between any 2 of the 6 parts of the test amounted to or exceeded 3 years in the fourth grade, 3½ years in the fifth and sixth grades, and 4 years in the seventh grade, the child was designated as an extreme case.* Progressively increasing variance spans used in these standards are in correspondence with the principle used in the construction of age-grade tables discussed in Chapter VIII.

When the selected standards were applied to those children in the fourth, fifth, sixth, and seventh grades who were not extremely above or extremely below normal in educational, chronological, or mental age, a total of 270 cases were located distributed among the grades as follows: fourth grade, 42; fifth grade, 51; sixth grade, 93; and seventh grade, 84. The complete list of these 270 children shows that in the fourth grade language usage and sentence meaning achievement was

TABLE CXV. DISTRIBUTION AND ANALYSIS OF THE CHRONOLOGICAL, EDUCATIONAL, AND MENTAL AGE STATUS OF THE 239 CASES IN MONROE COUNTY LISTED IN THE DISCIPLINARY GROUP BY THE TEACHERS, AS DISCOVERED BY THE TESTING PROGRAM

Combination			Grade								Total
CA	EA	MA	1	2	3	4	5	6	7	8	
Normal	Normal	Normal	14	20	26	23	17	24	12	10	146
Above	Above	No data	..	1	1	..	..	..	..	..	2
Above	Below	No data	3	8	1	2	1	..	..	..	15
Above	Normal	Normal	..	..	2	3	..	..	..	..	5
Above	Normal	No data	2	2	4	2	..	1	..	..	11
Above	No data	No data	8	..	1	6	2	..	..	..	17
Above	Normal	Below	..	1	..	1	..	1	..	..	3
Normal	Below	No data	7	5	2	..	1	..	..	..	15
Normal	Above	Normal	..	1	..	..	..	1	1	..	3
Normal	Normal	Above	..	..	..	..	2	1	..	1	4
Normal	Normal	Below	..	..	3	1	3	5	2	..	14
Normal	Below	Below	..	..	1	..	..	2	..	..	3
Below	Below	No data	1	..	..	..	..	..	..	..	1
Total..	.....	.....	35	38	41	38	26	35	15	11	239

* The data for the study of the internal variation in achievement were collected by Mr. Clarence Leuck, Superintendent of Monroe County Schools.

TABLE CXVI. DISTRIBUTION AND ANALYSIS OF THE CHRONOLOGICAL, EDUCATIONAL, AND MENTAL AGE STATUS OF THE 234 CASES IN MONROE COUNTY LISTED IN THE "MISCELLANEOUS GROUP" BY THE TEACHERS, AS DISCOVERED BY THE TESTING PROGRAM

Combination			Grade								Total
CA	EA	MA	1	2	3	4	5	6	7	8	
Normal	Normal	Normal	14	20	18	18	12	26	20	20	148
Above	Above	No data	..	3	..	..	..	..	..	..	3
Above	Below	No data	2	7	1	1	..	..	..	..	11
Above	Normal	Normal	2	4	5	12	3	1	1	1	29
Above	Normal	No data	..	3	4	..	..	..	..	..	7
Above	No data	No data	5	1	3	1	2	..	..	..	12
Above	No data	Below	1	..	..	..	..	1	..	..	2
Normal	Below	No data	2	2	1	..	..	..	..	..	5
Normal	Below	Below	..	..	1	..	..	1	..	..	2
Normal	Above	Normal	..	..	..	..	..	..	1	..	1
Normal	Below	Normal	2	4	1	..	..	..	..	..	7
Normal	Normal	Below	..	..	2	..	3	1	..	1	7
Total..	.....	.....	28	44	36	32	20	30	22	22	234

TABLE CXVII. NORMAL PUPILS IN MONROE COUNTY WITH EXTREMELY HIGH ACHIEVEMENT IN VARIOUS SCHOOL SUBJECTS DISTRIBUTED BY GRADES *

Subject	Grade				Total
	4	5	6	7	
Language usage	15	27	17	26	85
Arithmetic reasoning	3	6	11	7	27
Arithmetic computation	3	6	45	43	97
Word meaning	1	3	0	1	5
Sentence meaning	14	8	10	5	37
Paragraph meaning	6	6	13	4	29
Total	42	56	96	86	280†

* This table is read as follows: Of the 42 fourth grade pupils who were normal in composite achievement but extremely high in 1 or more subjects, 15 were extremely high in language usage, 3 in arithmetic reasoning, etc.

† The total is 280 instead of 270 because 8 pupils had the same high achievement in 2 subjects and were tabulated in each subject, and 1 had the same high achievement in 3 subjects and was tabulated in each subject.

highest and arithmetic reasoning lowest; in the fifth grade language usage was highest and sentence meaning lowest; and in the sixth and seventh grades arithmetic computation was highest and sentence meaning lowest. Tables CXVII and CXVIII show the frequencies of the six parts of the test as the high and the low subject.

TABLE CXVIII. NORMAL PUPILS IN MONROE COUNTY WITH EXTREMELY LOW ACHIEVEMENT ON VARIOUS SCHOOL SUBJECTS DISTRIBUTED BY GRADES

Subject	Grade				Total
	4	5	6	7	
Language usage	11	9	19	10	49
Arithmetic reasoning	15	7	9	6	37
Arithmetic computation	11	8	17	11	47
Word meaning	4	5	19	21	49
Sentence meaning	2	18	37	33	90
Paragraph meaning	8	12	10	11	41
Total	51	59	111	92	313*

* The total is 313 instead of 270 because 31 pupils had the same low achievement in 2 subjects and were tabulated in each subject, and 6 had the same low achievement in 3 subjects and were tabulated in each subject.

It will be noted from the data presented that there seems to exist a distinct tendency for teaching emphasis to be shifted from language and reading in the fourth and fifth grades to arithmetic in the sixth and seventh grades.

The list of these variable-subject extreme cases was made the basis for reports to teachers of the pupils involved. These reports stated the type of variation existing and recommended the steps that the teacher might take to eliminate the extreme variation in achievement. Sample reports are presented here:

Sample No. 1.
Pupil K. D. School A Grade 5
Chronological age — 10 years
Mental age — 11 years, 8 months
Teacher's marks — Fair
Arithmetic computation age — 13 years, 6 months
Paragraph meaning age — 9 years, 6 months
Comment — Fair student, well above normal age in most subjects. Low in reasoning ability and determination of meanings. Teacher should stress development of reasoning ability and facility in reading for comprehension.

Sample No. 2.
Pupil J. J. School B Grade 4
Chronological age — 10 years, 6 months
Mental age — 11 years, 8 months
Teacher's marks — 84
Language usage age — 14 years
Arithmetic reasoning age — Below 9 years
Comment — Greater emphasis should be placed on arithmetic achievement. Pupil is capable of doing better work in reading and arithmetic.

Sample No. 3.
Pupil L.C. School C Grade 6
Chronological age — 11 years, 6 months
Mental age — 13 years, 4 months
Teacher's marks — 90
Language usage age — 14 years, 6 months
Arithmetic computation age — 10 years
Comment — Drills in arithmetic fundamentals are necessary. Pupil is not working up to his ability in any subject except language.

It is planned to make further study of these 270 cases to determine the improvement made in achievement for those school subjects in which low scores were made. Teachers should realize that by giving special attention to a few of the outstanding achievement deficiencies, the achievement level of the group may be materially raised and many pupils removed from the ranks of extremely low cases.

The task of making case studies of those children who were extremely high or low in chronological, educational, or mental ages was begun before the general survey was completed. A few condensed case study reports are presented here to indicate the nature of the work being attempted.

The first case represents a child listed by the teacher as being out-of-line but found to be normal on the basis of test results.

Case No. 1. W. W. is a boy in the sixth grade, 10½ years of age chronologically (normal for fifth grade but within the limits of our moderately normal group for sixth grade), who was achieving at the eleventh year level (normal for six grade), whose mental age was 10½ (normal for fifth grade but within the moderately normal group limits for the sixth grade) with an intelligence quotient of 102 and an educational quotient of 109. This boy has traveled rather widely, and he is doing his school work without serious effort with some time to spare for his own "spontaneous activities."

The second case represents a child found to be extremely above

normal in mental age but not recognized by the teacher as an out-of-line case.

Case No. 2. S. A. is a girl in the fourth grade 9½ years of age chronologically, who was achieving at the tenth year level (fifth grade), whose mental age was 12½ (normal for the seventh grade) with an intelligence quotient of 128 and an educational quotient of 105. This pupil is very seriously "retarded" in terms of ability and is failing to work up to her possibilities. She should be in the accelerated group. Reclassification and stronger motivation would help in this case.

The following cases represent children who were recognized both by the testing program and by the teacher as being extremely out-of-line.

Case No. 3. L. W. is a boy 12 years, 10 months of age, in the third grade, with a reading age of 10 years, whose mental level is 6 years, 5 months with an intelligence quotient of 50. His age places him at the mean of the seventh grade (and as a normal minimum location at the fifth grade level) but he is decidedly out-of-line in this particular respect. His mental ability locates him at the middle of the first grade. If the mental rating is reasonably reliable in this case we should not expect him to achieve more than he is doing at present. He started to school at the age of 6 and has spent 2 years in each grade thus far and this would seem to be about his speed of progress under ordinary conditions. He seems to be happy and contented and there are no very clear indications of any serious maladjustment. His is a case of a dull pupil progressing very slowly. Patience and persistence are the virtues his teachers should possess in large measure.

Case No. 4. P. F. is a boy 12 years of age in the third grade whose reading age is 8½ and whose mental age is 5 years, 5 months with an intelligence quotient of 43. On the basis of these facts developed this pupil seems to be doing about as well in school as we have a right to expect of him. He started to school at the age of 6, repeated every year, and does not like school. His emotional condition—"overgrown, awkward, and confused, restless and nervous during the testing"—is seemingly a disturbing factor in his case. His father was a drunkard, killed in a drunken brawl, his family is poverty stricken, and he is unwell. He requires quiet, patient handling and the skill and insight of the understanding teacher.

Case No. 5. R. W. is a boy 12½ years of age in the fourth grade whose educational age is 8½ years and whose mental age is 7½ years with an intelligence quotient of 60 (Binet intelligence quotient of 29. Comment of the examiner reads—"This is not a true measure as he was so stubborn he would not respond."). On the basis of life age alone he should be in the fifth grade as a minimum; on the basis of his mental age solely he should not be above the second grade probably; but he is apparently doing work about normal for the third grade. Teacher's opinion is that he "*cannot learn.*" His home life is unpleasant and unhappy. His father and mother are separated and his father is now living with a common-law wife. This case is probably headed for social difficulty and unless school and society make a major effort to recondition or re-educate him, especially with respect to his sullenness, we will have an institutional case on our hands within the next four years and for a period of years thereafter.

CHAPTER XIV
THE TASK AHEAD

To get a clear picture of the task which lies ahead for the school officials of Monroe County, a brief review of the survey findings will be presented.

The administration of the schools of the county is characteristic of county school administration throughout the state. There is possibility of alleviating some of the difficulties encountered in common with other county school systems of the state through greater coöperation on the part of township trustees and possibly through the establishment and operation of joint schools so that the number of schools can be reduced and the size and efficiency of schools can be increased.

The physical facilities for schools in the county are in some cases deplorable. Such a condition is common in many communities throughout the United States. Definite efforts should be made to improve buildings which must continue to be used for school purposes, and steps should be taken to abandon those buildings unfit for use and not properly located for replacement. Care should be taken in the erection of new buildings that they are located in conformity with the plan proposed in Chapter V or in conformity with some other plan which will provide satisfactorily for the future school needs of the county and will take care of the county's financial and educational interests. Due consideration should be given to the possibility that the eastern third of the county may at some time in the future become state and federal forest areas.

School officials should continue to employ teachers who possess the training and experience necessary to give them an understanding of the needs of the pupils of Monroe County.

The working conditions of teachers should be improved. Teachers of the county have changed position either voluntarily or because of dismissal on the average of once for each 3 years of teaching experience. Of every 7 changes, 2 were because of dismissal. Shifting of teachers from one position to another or dismissal of teachers from their positions is often a recognition that careful selection was not exercised in the first place. Trustees should be exceedingly careful in the selection and placement of teachers so that later there would not be need for changes in placement or for dismissals.

Wherever possible, trustees should select teachers who possess training beyond the required minimum. Only 26 of the 133 teachers of the county have been granted the Bachelor's degree, representing four years of college training. There is a growing tendency among educators throughout the country to favor three or four years of training for elementary teachers.

Teachers' salaries in the county are extremely low. A total of 72 per cent of the teachers received the minimum salary of $800. While there are no available data to show that this practice is common in the state, yet it is felt that trustees might secure more satisfactory educational results if a county-wide salary schedule were adopted. Such a

salary schedule should be based upon sound principles and should reward through substantial salary increments those teachers who show progressiveness.

Half of the teachers do not live in the community in which they teach. Perhaps further consolidation of schools, greater permanence of teacher tenure, and increased salaries will aid in drawing a greater number of teachers into community life to the extent that teachers will prefer to live near their work.

The daily programs of the 43 one-teacher schools of the county show that on the average 26 class groups per school meet each day, that the range of the number of class groups meeting each day is from 19 to 35, and that the size of the average class group is 4 pupils. Subject and grade combinations may serve to decrease the number of class groups and to increase the size. Social studies and language arts may be made to include all the subjects now being given in those fields and thus reduce the number of class groups. Time allotments should be based upon the ability of the pupils in each group, the level of achievement attained, and the activities required by the subject field. Rotary programs which were found in use in 13 classrooms should be used only with the approval of the county superintendent.

Too large a per cent, 35.8, of chronologically overage pupils was found among the school children of the county. Such a condition usually reflects a high per cent of failures and an extreme amount of retardation. It was found that 31.7 per cent of the children enrolled in school had failed one or more times and that pupils in school had spent 8.9 per cent longer time in school than if they had made normal progress through the grades. This retardation was most extreme in the first grade, in which pupils had spent 30.6 per cent longer time than normal.

Educational achievement in the first grade was found to be extremely low. A total of 68.9 per cent of the children in the first grade was found to be below normal in reading achievement. The children in the third and fourth grades were found to be nearly normal in achievement, but with each grade above the fourth the degree of below-normalness increased until the eighth grade, where achievement was more than one-half a grade below normal. Satisfactory achievement was made for the county as a whole in arithmetic and language in the upper five grades. Throughout the upper grades a striking deficiency in reading achievement was discovered. This reading deficiency in the schools of the county calls for immediate and drastic action. Observations made by the members of the survey staff revealed a very noticeable lack of supplementary reading material and reference books in many schools.

The testing program disclosed also some glaring examples of faulty classification of pupils, particularly in the sixth and seventh grades in Richland Township, and the fifth, sixth, seventh, and eighth grades in Bean Blossom Township. Re-testing of the grades which were involved and a careful study of the individual cases should precede reclassification.

A supplementary testing program carried out in the Bloomington city schools showed that the achievement in the city schools was approximately a full half-grade above that in the county schools. Improvement of the physical facilities, increase in the length of the school term,

provision of adequate supplementary reading materials, increase in the salaries and qualifications of teachers, and other such factors brought about in the rural schools might serve to bridge the gap in achievement between city and rural school pupils.

Achievement as measured by the Indiana New-Type Test did not correspond with that indicated by the Stanford Achievement Test. However, there seems to be some evidence that the former tests were not given under uniform conditions. If the results of the Indiana New-Type Test were to be used for comparative purposes, then the tests should be given uniformly and strictly in accordance with standard instructions. In no other way can the results be compared with safety.

The testing program revealed 696 children who were extremely above or below normal in chronological, educational, or mental age. About one-third of these cases was found in the first and second grades. Teachers listed a total of 1,476 children whom they considered to be out-of-line. Of this number, teachers classified about 60 per cent in the retarded group. In 452 cases the teacher's opinion corresponded with the findings of the testing program. Teachers did not seem to recognize readily children with extreme levels of educational achievement or of mental ability. It is quite evident that teachers need to make more intensive study of the individual pupils under their direction.

Of those pupils who were not extremely above or below normal in chronological, educational, or mental age, 270 were found who showed extremely above or below normal achievement in individual subjects. Achievement in sentence meaning was extremely below normal, especially in the fifth, sixth, and seventh grades, while achievement in arithmetic was extremely above normal in those same grades.

As a part of the survey, case studies were made of a group of children who were extremely above or below normal and of another group who showed extreme variation in achievement between subjects. These case studies were made with the purpose of aiding teachers in the improvement of achievement and in the providing of more adequate adjustment of out-of-line pupils. The making of these case studies should stimulate teachers to learn more about the pupils under instruction.

The investigation shows that a better plan of administration is possible, that school consolidation can effect economies, that school buildings and surroundings are in immediate need of improvement, that teachers can be provided with better working conditions, and that numerous other steps can be taken to insure improved educational facilities. But these factors are only supplementary to the primary purpose of the school, that of fitting the individual child to live well in an acceptable social environment.

The mass of detail presented in this report points unmistakably to a single conclusion. The schools of Monroe County should be fitted more perfectly to the needs of the children.

Supplementary factors in education are important, however, for they serve to facilitate the achievement of the fundamental objectives of education. Safe and sanitary features in the school environment help the teacher to encourage children toward the development of physically sound and healthy bodies. Physical fitness provides the basis for mental fitness

and educational achievement. Beauty in school buildings and grounds aids materially in the development of aesthetic appreciations and understandings and thus makes possible better living in a social environment. School consolidation makes possible a more adequate present social setting for children and at the same time, it is thought, reduces the cost per unit of educational achievement when educational achievement is interpreted in its broader sense. A generous quantity of instructional material in the hands of wise, well-trained, and interested teachers can accelerate the speed of educational achievement of children.

But the achievement of the primary objective of education is of necessity a task which involves a type of pupil-teacher relationship that is individual and specific in character, continuous in duration, and evangelistic in spirit. If the schools of Monroe County are to progress, the task ahead lies in the direction of developing such pupil-teacher relationships.

The first step, therefore, is to complete in as great detail as possible the case study of each child in need of special attention. As has been indicated, some work has been done toward this end. Much more work remains. No time should be lost in providing for the continuance of the work.

The second step involves making available to teachers the results of the case studies and providing teachers with a well-organized and carefully worked out procedure for bringing about the most satisfactory school adjustment possible for each child. This supervisory program, carried out under the supervision of the county superintendent, should direct the attention of teachers toward (1) the location of unadjusted children, (2) the determination of the causes of unadjustment, (3) the possible steps in the removal of cause or the alleviation of unadjustment, (4) the application of selected procedures, (5) the careful determination of the effect of procedures applied, and (6) the try-out of other procedures where satisfactory results have not been achieved. The supervisory program can have, in addition, the more general aspects of improvement of subject achievement, increase in quantity of instructional materials, and beautification and improvement of school buildings and grounds.

In conclusion it should be pointed out that the responsibility for the continued improvement of the schools of rural Monroe County lies directly in the hands of the people of rural Monroe County.

A List of Bulletins in the Field of Education, Indiana University

The following is a list of the bulletins published by the School of Education, Indiana University.

All bulletins which are available at the present time may be secured for fifty cents ($.50) per copy, with the exception of the *Second Revision of the Bibliography of Educational Measurements;* the *Bibliography of School Buildings, Grounds and Equipment—Part I; The Philosophy of Human Relations—Individual and Collective;* the *Bibliography of School Surveys and of References on School Surveys;* and the *Bibliography of College and University Buildings, Grounds, and Equipment,* which may be secured for seventy-five cents ($.75) per copy. *The Philosophy of Human Relations—Individual and Collective* and all fifty-cent bulletins of the School of Education may be obtained from the University Bookstore. The other four bulletins should be ordered through the Bureau of Coöperative Research, Indiana University.

Proceedings of the High School Principals' Conference (November 23 and 24, 1923). Vol. I, No. 1, 1924. 85 p. (Supply exhausted.)

Investigation of Nursing as a Professional Opportunity for Girls. Part I, Technical Study; Part II, Vocational Information Bulletin. By Florence E. Blazier. Vol. I, No. 2, 1924. 69 p.

Proceedings of the Eleventh Conference on Educational Measurements. Vol. I, No. 3, 1925. 141 p.

Proceedings of the High School Principals' Conference (November 14 and 15, 1924). Vol. I, No. 4, 1925. 49 p. (Supply exhausted.)

First Revision of the Bibliography of Educational Measurements. Compiled by the Bureau of Coöperative Research. Vol. I, No. 5, 1925. 147 p. (Supply exhausted.)

Proceedings of the Twelfth Conference on Educational Measurements. Vol. I, No. 6, 1925. 76 p.

The Effect of Population upon Ability to Support Education. By Harold F. Clark. Vol. II, No. 1, 1925. 28 p.

Proceedings of the High School Principals' Conference (November 20 and 21, 1925). Vol. II, No. 2, 1925. 77 p. (Supply exhausted.)

A Cross-Indexed Bibliography on School Budgets. By Harold F. Clark. Vol. II, No. 3, 1926. 66 p.

A Comparison of the Results Made on Certain Standardized Tests by Pupils in the Bloomington High School Who Were Taught in Classes of the Same Grade by University Student Teachers and by Regular High School Teachers. By Carl G. F. Franzén. Vol. II, No. 4, 1926. 19 p.

Proceedings of the Thirteenth Annual Conference on Educational Measurements. Vol. II, No. 5, 1926. 103 p.

When to Issue School Bonds. By Harold Florian Clark and Paul Royalty. Vol. II, No. 6, 1926. 16 p.

Students' Attitude Toward Examinations. By Grover T. Somers. Vol. III, No. 1, 1926. 48 p.

Proceedings of the High School Principals' Conference (November 12 and 13, 1926). Vol. III, No. 2, 1926. 27 p.

Index Numbers in School Administration. By Harold F. Clark. Vol. III, No. 3, 1927. 35 p.

Topical Analysis of 234 School Surveys. Compiled by the Bureau of Coöperative Research. Vol. III, No. 4, 1927. 111 p. (Supply exhausted.)

Proceedings of the Fourth Annual Conference on Elementary Supervision. Vol. III, No. 5, 1927. 64 p.

Proceedings of the Fourteenth Annual Conference on Educational Measurements. Vol. III, No. 6, 1927. 66 p.

Some Phases of the Junior College Movement. By I. Owen Foster, Harold F. Clark, Willard W. Patty, and Leo M. Chamberlain. Vol. IV, No. 1, 1927. 125 p. (Supply exhausted.)

Second Revision of the Bibliography of Educational Measurements. By Henry Lester Smith and Wendell William Wright. Vol. IV, No. 2, 1927. 251 p.

Bibliography of School Buildings, Grounds, and Equipment, Part I. By Henry Lester Smith and Leo Martin Chamberlain. Vol. IV, No. 3, 1928. 326 p.

Proceedings of the High School Principals' Conference (November 18 and 19, 1927). Vol. IV, No. 4, 1928. 54 p.

The Economic Effects of Education. By Harold F. Clark. Vol. IV, No. 5, 1928. 39 p.

Proceedings of the Fifteenth Annual Conference on Educational Measurements. Vol. IV, No. 6, 1928. 73 p.

Proceedings of the Fifth Annual Conference on Elementary Supervision. Vol. V, No. 1, 1928. 54 p.

Proceedings of the High School Principals' Conference (November 16 and 17, 1928). Vol. V, No. 2, 1928. 33 p.

The Development and Use of a Composite Achievement Test. By Wendell William Wright. Vol. V, No. 3, 1929. 90 p.

An Analysis of the Attitudes of American Educators and Others Toward a Program of Education for World Friendship and Understanding. By Henry Lester Smith and Leo Martin Chamberlain. Vol. V, No. 4, 1929. 109 p.

Tentative Program for Teaching World Friendship and Understanding in Teacher Training Institutions and in Public Schools for Children Who Range from Six to Fourteen Years of Age. By Henry Lester Smith and Sherman Gideon Crayton. Vol. V, No. 5, 1929. 54 p.

Proceedings of the Sixteenth Annual Conference on Educational Measurements. Vol. V, No. 6, 1929. 96 p.

Proceedings of the Sixth Annual Conference on Elementary Supervision. Vol. VI, No. 1, 1929. 73 p.

An Analysis of the Duties of County School Superintendents and Superintendents of Schools in Certain Cities in Indiana. By Henry Lester Smith and Leo Martin Chamberlain. Vol. VI, No. 2, 1929. 94 p.

Proceedings of the High School Principals' Conference (November 22 and 23, 1929). Vol. VI, No. 3, 1930. 51 p.

Coöperative Studies in Secondary Education. By Henry Lester Smith and Carl G. F. Franzén. Vol. VI, No. 4, 1930. 121 p.

Proceedings of the Seventeenth Annual Conference on Educational Measurements. Vol. VI, No. 5, 1930. 103 p.

Proceedings of the Seventh Annual Conference on Elementary Supervision. Vol. VI, No. 6, 1930. 102 p.

A Study in Teacher Supply and Demand in Indiana. By I. Owen Foster, Robert K. Devricks, Harry N. Fitch, Earl C. Bowman, and George L. Roberts. Vol. VII, No. 1, 1930. 77 p.

Proceedings of the High School Principals' Conference (November 7 and 8, 1930). Vol. VII, No. 2, 1930. 70 p.

The Philosophy of Human Relations: Individual and Collective—A Source Book. By Henry Lester Smith and Harold Littell. Vol. VII, No. 3, 1931. 326 p.

The Psychology of Human Relationships: Individual and Social—A Source Book. By Henry Lester Smith and Levi McKinley Krueger. Vol. VII, No. 4, 1931. 107 p.

Proceedings of the Eighteenth Annual Conference on Educational Measurements. Vol. VII, No. 5, 1931. 83 p.

Efficiency in College Management. By John Dale Russell. Vol. VII, No. 6, 1931. 143 p.

Bibliography of School Surveys and of References on School Surveys. By Henry Lester Smith and Edgar Alvin O'Dell. Vol. VIII, Nos. 1 and 2, 1931. 212 p.

Proceedings of the Nineteenth Annual Conference on Educational Measurements. Vol. IX, No. 1, 1932. 139 p.

Bibliography of School Buildings, Grounds, and Equipment—Part II. By Henry Lester Smith and Forest Ruby Noffsinger. Vol. IX, No. 2, 1933. 182 p.

Bibliography of School Buildings, Grounds, and Equipment—Part III. By Henry Lester Smith and Forest Ruby Noffsinger. Vol. IX, No. 3, 1933. 130 p.

A Brief Summary of Literature on Leadership. By Henry Lester Smith and Levi McKinley Krueger. Vol. IX, No. 4, 1933. 80 p.

Proceedings of the Twentieth Annual Conference on Educational Measurements. Vol. X, No. 1, 1933. 98 p.

Bibliography of College and University Buildings, Grounds, and Equipment. By Henry Lester Smith and Forest Ruby Noffsinger. Vol. X, No. 2, 1934. 199 p.

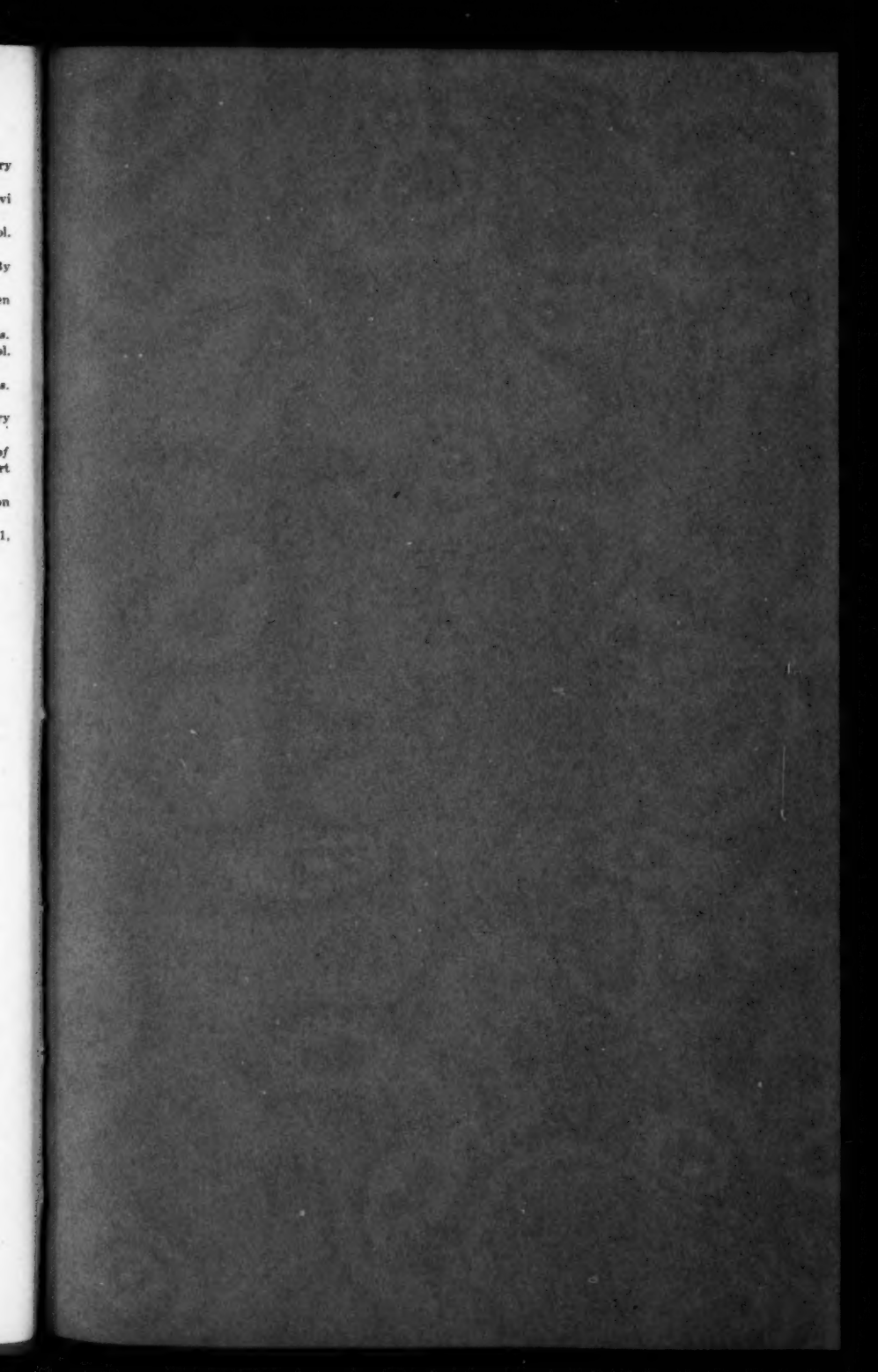
Factors Affecting the Organization of School Attendance Units. By Raleigh Warren Holmstedt. Vol. X, No. 3, 1934. 32 p.

The Old World Historical Background of Religious and Moral Education in Schools. By Henry Lester Smith, Robert Stewart McElhinney, and George Renwick Steele. Vol. X, No. 4, 1934. 144 p.

Proceedings of the Twenty-first Annual Conference on Educational Measurements. Vol. XI, No. 1, 1934. 96 p.

Bibliography of School Buildings, Grounds, and Equipment—Part IV. By Henry Lester Smith and Forest Ruby Noffsinger. Vol. XI, No. 2, 1935. 216 p.

A Brief Survey of Present-Day Religious and Moral Education in the Schools of Countries Other Than the United States of America. By Henry Lester Smith, Robert Stewart McElhinney, and George Renwick Steele. Vol. XI, No. 3, 1935. 185 p.

Some Practical Efforts to Teach Good Will. By Henry Lester Smith and Peyton Henry Canary. Vol. XI, No. 4, 1935. 169 p.

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